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IN THE

Supreme Court of the United States

OCTOBER TERM, 1967

No. 1384

MODERN PLASTIC MACHINERY CORP.,

Petitioner,

vs.

FRANK W. EGAN & COMPANY and
WILLIAM H. WILLERT,

Respondents.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE THIRD CIRCUIT

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To the Honorable
the Chief Justice and Associate Justices
of the Supreme Court of the United States:

Your Petitioner, Modern Plastic Machinery Corp., prays that a writ of certiorari should issue to review the judgment of the Court of Appeals for the Third Circuit entered on December 29, 1967, 387 F.2d 319, petition for rehearing denied February 1, 1968.

Opinions of the Courts Below

(a) Opinion of the District Court reported at 260 F.Supp. 22 (Appendix A).

(b) Opinion of the United States Court of Appeals for the Third Circuit in Frank W. Egan & Company and William H. Willert, v. Modern Plastic Machinery Corp., No. 16,446 dated December 29, 1967, reported in 387 F.2d 319 (1967). Copies of the Opinion, the Judgment and the order denying the Petition for Rehearing are appended to this petition (Appendices B, C and D).

The patent here in suit is also before other courts in the following case:

Frank W. Egan & Company and William H. Willert, v. the New Britain Machine Co. in the United States District Court, Hartford, Conn., pending under No. 12,427, not yet decided.

Jurisdiction

1. This is a suit arising under the Patent Laws of the United States, Title 35; 35 U.S.C. § 281; 28 U.S.C. §§ 1338 (a) and 1400 (b).

2. The jurisdiction of this Court is invoked under Title 28, Section 1254 of the United States Code.

3. The date of the decree which petitioners seek to have reviewed is December 29, 1967. Petition for rehearing was denied on February 1, 1968.

Question Presented

The principal and sole question presented is the validity of claims 1 and 4 of the Willert patent No. 2,734,226. The District Court found invalidity of claims 1 and 4, but did not rule on the issue of infringement and the Court of Appeals for the Third Circuit reversed finding validity of claims 1 and 4, and remanded the case to the District Court for determination of the infringement issue.

Statutory Provisions and Procedure Rule Involved

This case involves Sections 101, 102, 103, 112 and 282 of Title 35 of the United States Code, and Federal Rule of Civil Procedure Number 52, all of which are set forth in Appendix F hereof.

Statement of the Case

The patent in suit (Appendix for Appellants, p. 581a) entitled "Injection Molding Apparatus", discloses and claims a plastic material plasticizing and delivering mechanism which can be employed without a mold and preferably only to an injection molding machine.

A plastics injection molding machine consists of two basic units. The injection unit, to which the alleged Willert invention relates, also includes a reciprocating screw, and the mold into which plastic material is injected.

The District Court, speaking through Judge Wortendyke, stated in its opinion, after a trial of about 2 weeks, as follows (Appendix A, p. 46):

> "I find as a fact, and *it is conceded by the plaintiffs*, that *each* of the structural features of the Willert patent is disclosed in the prior art." (Italics added.)

The District Court found further that "claims 1 and 4 of the patent in suit do not *explain* this purported description of the manner in which the screw retreats." (p. 46)

In the trial of this case before the District Court, the plastic material plasticizing and delivering mechanism was shown and demonstrated on a model machine and the District Court was clearly advised in the premises. The District Court rendered an opinion and made findings of fact and conclusions of law.

One of the findings held that Plaintiffs (Respondents herein) themselves in a footnote in their brief (p. 49b) state:

> "The structure for applying an adjustable back pressure to a reciprocating screw was then [1950 and 1951] available (e.g. Wiedmann (D-8), Fig. 1, valve 10 and associated hydraulic circuitry) *to any plastics injection molding machine designer* who wanted to incorporate that feature in his machine." (Italics added.)

It was only logical when the District Court concluded that Wiedmann's hydraulic transmission patent, therefore, was a structural element old in the art and, as such, is a proper reference for determining obviousness of the claims in suit. (*The Gould-National Batteries, Inc.* v. *Gulton Industries, Inc.*, 361 F.2d 912, 914 (3rd Cir. 1966). Section 103 of the Act expressly contemplates that the "subject matter sought to be patented and the prior art may differ" and yet render obvious the subject matter as a whole. The District Court found invalidity of the claims 1 and 4 of the Willert patent upon applying the doctrine of *Graham* v. *John Deere Co.*, 383 U.S. 1, 17 (1966). The Court of Appeals of the Third Circuit found validity of claims 1 and 4 of the Willert patent after applying the same teachings of the *Graham* and *Adams* cases. There is a direct conflict of determination between the District Court and the Court of Appeals for the Third Circuit, based on the same doctrine. It appears that the Court of Appeals misconstrued the doctrine of *Graham* v. *John Deere Co.*, particularly in the light of Plaintiffs' (Respondents') concession. The Court of Appeals for the Third Circuit, while referring to *Graham* v. *John Deere Co.*, did not apply the test of patentability provided therein.

Reasons for Granting the Writ

The discretionary power of this Court to grant a writ of certiorari is involved upon the ground of the direct

disagreement between the District Court, 260 F.Supp. 22, and the Court of Appeals for the Third Circuit, 387 F.2d 319, as to the validity of claims 1 and 4 of the Willert patent.

In accordance with the thoroughly established practice of this Court, such a conflict between the decisions of the District Court and of the Court of Appeals, particularly when coupled with the important question of Federal Law involved and when both Courts base their decision on the same doctrine enunciated by the same guiding case (*Graham* v. *Deere*), which constitutes a mark stone on the issue of obviousness, and thus constitutes special and important reasons for the grant of the writ as provided in Rule 19.1 (b) referring to a Court of Appeals which has decided a federal question, in a way in conflict with applicable decisions of this Court.

With the prior art the same, the District Court held the Willert patent invalid and the Court of Appeals overturned the decision of the District Court and held the Willert patent valid. There is a fundamental difference between the District Court and the Court of Appeals in their respective legal views as to the patent in suit, in spite of Respondents' concession.

The discretionary power of this Court to grant a writ of certiorari is involved upon the further ground that the decision of the United States Court of Appeals for the Third Circuit is a decision involving a question of Federal Law, namely, as to test of patentability that is contrary to that set forth in the Statute, Title 35, Section 103, of the United States Code. The test of patentability under the Statute is an important question of Federal Law which should be settled by this Court.

A further reason is that the decision of the Court of Appeals for the Third Circuit is a decision with respect to review of Findings of Fact by the District Court that

is in conflict with the express provisions of Rule 52 of the Federal Rules of Civil Procedure; and is in conflict with the decisions of this Court upon that question, and is in conflict with the decisions of other Courts of Appeals.

A still further reason is that this case is a dispute rising beyond the interest of the parties involved in this litigation, since numerous manufacturers in the United States and manufacturers in foreign countries who import the machine into the United States have been threatened by Respondents herein, and as far as it is known to the Petitioner at the present time, Respondents already instituted patent infringement action on the same Willert patent in suit against one of the U.S. manufacturers. Unless the reversing decision by the Court of Appeals for the Third Circuit is properly evaluated, numerous additional suits for patent infringement may be instituted by Respondents.

Argument

This case presents a stronger justification for grant of the writ than the usual case wherein a patent has been litigated, because in a surprising disregard of the Finding of Facts by the District Court, an alleged novel concept has been found by the Court of Appeals which concept was not only clearly found in the prior art by the District Court, but even has been conceded as old by the Respondents themselves. This alleged novel concept is "the adjustable back pressure" which controls the speed of the rearwarded movement of a reciprocating screw in a barrel of an injection molding machine.

Respondents instituted this suit alleging validity of the Willert patent and infringement by Petitioner. The District Court, Judge Reynier J. Wortendyke, Jr., applied the test of "obviousness" under Section 103 and in accordance with *Graham* v. *John Deere Co., supra, U. S.* v. *Adams*, 383 U.S. 39 (1966) and *Calmar, Inc.* v. *Cook Chemical Co.*,

383 U.S. 1 (1966) and after an exhaustive and comprehensive study, found claims 1 and 4 of the Willert patent invalid (Appendix A), finding the prior art, particularly the Wiedmann patent 2,397,395 (Appendix for Appellants, p. 683a), to disclose means to impose an adjustable "back pressure" to be old.

The District Court stated that it did not consider secondary considerations, such as, commercial success, and the numerous licensees of the Willert patent, since the licensees of Respondents were licensed under a machine *not embodying the Willert patent.* The District Court found that even the licensed machine of *Egan* (Willert's exclusive licensee) does not incorporate the structure of the claims of the Willert patent and that "despite this, Egan sought protection for the machine, which he had manufactured, by selling and labeling it under the Willert patent". (Appendix A, p. 52)

Finding that the patent in suit was invalid, the District Court did not reach the issue of infringement "since an invalid patent cannot be infringed" (Appendix A, last two pages of the District Court opinion).

On appeal, in the Court of Appeals for the Third Circuit, for the first time Respondents presented a new theory that the entire essence and contribution of the Willert patent was the "adjustable back pressure", as applied to plasticizing (i.e., obtaining a better plastic consistency before molding) and that although the prior art admittedly showed the same in other related fields the invention was solely the *"concept" of recognizing* the benefit of adjustable back pressure in plasticizing and the contribution of Willert was this recognition that such adjustable back pressure could be applied in a molding device to control plasticizing (Appellants' Reply Brief before the Court of Appeals, p. 10).

This recognition of the "concept" was first set forth by Respondents and was accepted by the Court of Ap-

peals in spite of the fact that the claims 1 and 4 of the Willert patent call for a mechanism, not a concept—

> "Willert employs a method of achieving the result needed by the industry *conceptually different* from that disclosed by the prior art, and indeed, uses the hydraulic 'back pressure' in a manner neither indicated by the prior art nor obvious to a person skilled in the art, *at least on the record of this case*" (Appendix B, p. 61). (Italics added.)

The Court of Appeals even admitted (Appendix B, pp. 61, 62) that—

> "While back pressure may have resulted with respect to the retreat of the hydraulic fluid in the Italian patent, adjustable back pressure was not mentioned [this not withstanding the fact that the word 'adjustable' is not even set forth in the claims 1 and 4, in issue, although specifically set forth in the other claims and, therefore, any 'back pressure' shown in *any* patent, whether adjustable or not, is properly anticipatory] and the resultant back pressure was inconsequential and *not conceptually related to the invention.* It remained for Willert to *recognize* that adjustable back pressure, of *sufficient magnitude,* created through the use of hydraulic force *opposing* the retreat of the screw, resulted in eliminating substantial problems of the industry. It is the back pressure which causes more internal heat to be generated, obtaining greater uniformity of heat and its distribution, so essential to the proper plasticization and homogenization of the plastics material; speeds up the process, and reduces the likelihood of air bubbles and similar disruptive occurrences." (Italics added.)

The Court also erroneously stated that Petitioners' experts "hailed the precise point of Willert's invention, the

importance of the concept and its significance". And in a footnote cited that the—

> "defendant's executive vice-president, Leslie J. Kovach, in a paper which he presented to the American Society of Mechanical Engineers, evaluated the 'in-line reciprocating screw' of the *Willert patent* as a 'great advance in the processing and economy of plastic materials', and the adjustable back pressure functioning of the reciprocating screw as 'the real breakthrough in this new plasticizing concept'. The paper, incidentally, was presented in late 1964 after the instant suit was commenced." (Appendix E) (Italics added.)

However, as compared in Appendix E the plain fact of the matter is that Kovach never claimed that it was the *Willert patent* which was the break-through. The Kovach article *does not mention the name Willert,* but was referring to the break-through being the back pressure invented before Willert, namely, in the prior art. This was a *gross evidentiary error on the part of the Court of Appeals* and one which was promoted by the beyond fair comment distortion of Respondents before the Court of Appeals.

The Court of Appeals, as well as Respondents, admitted that all elements of the claims were both old and that only the elements "(f)" "(g)" disclosing the "back pressure" and a "limit switch" for stopping the retreat of the screw to determine the mold shot-size, respectively, were to be considered for the "obviousness" test, and to be compared with the prior art.

The Court of Appeals said that "the Plaintiffs [Respondents] here do not deny that the elements of the apparatus involved are old." Their concession includes the hydraulic system, as to which, Wiedmann shows "adjustable back pressure". The Court of Appeals, however,

stated that the use "in a remote cited art certainly suggests it to be less likely that a person of ordinary skill in that pertinent art would have arrived at the result achieved by the patent in suit". This statement is rather surprising because Wiedmann is part of the art of hydraulic controls and is thus in the storehouse of knowledge to which the men skilled in the plastic art will look.

The Court of Appeals eliminated element "(g)" correctly stating that "indeed, the file wrapper specifically shows the citation of the Dinzl patent as disclosing a limit switch to control the length of travel of the plunger". (p. 60)

The Court of Appeals pointed to the "back pressure" as the "precise point of Willert's invention, the importance of the concept and its significance" (Appendix B, p. 62) and clearly attributed the entire patentable invention to this one feature of "adjustable back pressure" in plasticizing machines.

Petitioners respectfully submit that, even assuming that "*adjustable* back pressure" was properly called for in claims 1 and 4 (which it was not, *adjustable* not being in the claims 1, 4 but being in other claims), it clearly was an error of the Court of Appeals not to find the same "adjustable back pressure" in the prior art, as it has been done by the District Court.

Even assuming that Willert's invention is to be judged on the basis of whether adjustable back pressure, as his contribution, was not obvious from the cited art, clearly this feature is disclosed in the cited art.

The Court of Appeals admitted that the Italian patent (Appendix for Appellant, p. 658a) shows back pressure, but held that it was not realized in the Italian patent that if a greater back pressure were provided, such would provide the compacting (plasticizing) results of Willert, completely neglecting that claims 1 and 4 do not even call for any back pressure at all and much less for a particular back pressure.

Therefore, the Circuit Court came to a very narrow holding by first deciding that "back pressure", the new concept offered by Respondents, was the heart of the invention; and then accepting the view proffered by *Respondents that even though such back pressure was shown per se* in related fields, Willert was the first to recognize that by actually using a *sufficient amount* of back pressure certain results and improvements in plastic consistency would be achieved. There is no basis in claims 1 and 4 for this contention, and even not in the specification, which is *completely silent about back pressure* and is evidently *an afterthought created for the purpose of this litigation* (cf. *Graham* v. *John Deere Co., supra,* at 25).

The Circuit Court completely erroneously evaluated the claims of the patent of Willert. First, the Court did not even recognize that a claim is to stand for what it states in clear ordinary terms. Then, as applied to the teachings of the *Graham* cases (*supra*), if any prior art teaches or meets these *terms* of the claim, that claim is anticipated.

Specifically, the claims 1 and 4 of the Willert patent call for "means for selectively forcibly but yieldingly opposing reciprocation of the screw in the passage in a rearward direction." Now this language calls for *any means for doing that function,* 35 U.S.C. 112 (last paragraph). Accordingly, any prior patent showing *any* "means . . . opposing reciprocation of the screw . . ." anticipates such broad language, even if such means does not squeeze out air bubbles in plastics, etc. (i.e. "back-pressure"—plasticizing). For example, the Willcox, *et al.,* patent (Appendix for Appellant, p. 680a) shows a control valve which is used to permit the screw to retreat and opposes retreat by fluid exiting from the chamber behind the piston through the control valve hole.

The essence of Willert's invention as found by the Court, i.e., the back pressure on the plastic, was not set forth in *Willert's claims 1 and 4,* because the claims only call for "means for selectively forcibly but yieldingly opposing reciprocation of the screw in the passage in a rear-

ward direction". Any *opposing* is forcibly. Any valve which opens to permit a screw to retreat has some frictional back pressure force which opposes the moving of the screw, and therefore even though it might not be sufficient for squeezing out air bubbles in certain consistency plastics, the claims as drafted call for no more than even these prior art patents. Also, it should be noted that nowhere in the Willert patent itself does it mention "back pressure" for the purpose of squeezing out the air bubbles. Back pressure was a fiction first perpetrated in the Court as the "inventive concept". (Appellants' Reply Brief, p. 10)

Accordingly, the Court of Appeals should not have added the attributed essence or concept of "back pressure" into the Willert claims which did not call for that specific use. In other words, Willert's claims, as they should have been considered by the Court, were much remote from the "inventive concept" or essence of his invention found by the Court of Appeals, and therefore any of the prior art showing any opposing back pressure anticipates the Willert claims.

It is well settled law that an inventor is limited to that, which he states in his claims as his invention as merely construed in the light of the specification, *United States* v. *Adams*, 383 U.S. 39, 48, 49 (1966).

Yet, nevertheless, even if we correct Willert's claims, as the Court of Appeals apparently did, to relate only to back pressure on the plastic *for compacting* same, then even still the prior art, especially the Italian patent, the Beck article and patent (Appendix for Appellant, pp. 757a, 727a, respectively) and the Wiedmann patent, clearly teaches this concept, and in any event, this Willert patent should not have been held valid.

The Willert Patent strikes a remarkable parallel to the Graham and Calmar cases

The *Graham* cases (*Graham* v. *John Deere Co.*; *Calmar, Inc.* v. *Cook Chemical Co.*, and *U. S.* v. *Adams*) considered

three very simple structures two of which, namely in *Graham* v. *John Deere Co.* and *Calmar, Inc.* v. *Cook Chemical Co.*, were held to fall on the side of invalidity while the device in *U. S.* v. *Adams* was decided on the side of validity. The three cases alone indicate the extent and limits of the "obviousness" concept as the test of patentable invention which has been analogized to that of the "reasonable man" concept. However, with patents the "inventive concept" is considerably more abstruse. Therefore, in order for this Honorable Court to properly clear up the question of what is invention or "obviousness", this Court selected these three illustrative cases (the *Graham* cases) to illustrate structures which show *as examples* what "obviousness" is intended to mean, as the best manner of explaining what "obviousness" is; only examples can illustrate the range and boundaries of the difficult concept of invention and non-invention, patentability and non-patentability.

A clear parallel exists with the case at bar.

To remove air bubbles and compact a plastic, it is *a priori* to *compress* same. To do same in a reciprocating screw injecting device (the device admittedly old) while the screw is retreating due to loading of the plastic, similarly, a *compressive* force on the plastic must be provided. Since the screw is and must retreat during loading, such a compressive force must be a back, reverse force to the direction of the retreating of the screw, i.e., the "back-pressure". This is the same back-pressure of the prior art, Italian, and Beck patents as well as Beck's article. The back-pressure must clearly be of sufficient force to compact the particular plastic, yet not strong enough to stop the retreat or loading of the screw (i.e., "forcibly but yieldingly").

This concept of *compacting* to remove air bubbles and obtain uniform density of the shot, is similar and a *priori*, to the fact of *Calmar, supra* at 34, 35, that to obtain a good seal above the collar the hold-down cap *must* be spaced

above the container cap or bottle neck, even though the drawing of the prior art (Fig. 3) did not disclose this space.

Similarly the drawing of the Willert *et al.* patent and its dimensions does not preclude that Willert *et al.* must be forced rearward solely hydraulically before plastic can be conveyed to the front of the screw in the "open" and "normal" position.

The Test of Patentability Applied by the Court of Appeals for the Third Circuit in Conflict With the Requirements of the Statute

The *Graham* cases, *supra,* require as the test of patentability under § 103 an inquiry into several related factors, namely:

> (1) a determination of the scope and content of the prior art,
>
> (2) an evaluation of the differences between the prior art and the claims at issue, and
>
> (3) applying and determining the level of ordinary skill in the art, and
>
> (4) against this background, obviousness or non-obviousness as a question of law, is determined. (383 U.S. 17)

The Wiedmann patent of the prior art teaches adjustable back pressure in a hydraulic system to control the cutting pressure; the Italian patent teaches back pressure on a retreating screw in a plastic molding device resisting the retreat of the screw; and the question is whether it is obvious from such prior art teachings for one skilled in the art to use same in injection molding devices to control the *compacting* of plastic while the screw retreats under the accumulation of the plastic.

In the Wiedmann patent, the back-pressure was used to maintain a constant back-pressure against a cutting blade attached to the front of the piston, whereas similarly in plastic machines the back-pressure is used to apply a constant pressure upon the plastic in front of the screw. The purpose for which the back-pressure is used of course depends on what the machine operates on.

In the *Graham* cases, *supra,* the Court stated that:

> "We have concluded that the 1952 Act was intended to codify judicial precedents embracing the principle long ago announced by this Court in *Hotchkiss* v. *Greenwood,* 11 How. 248 (1851), and that, while the clear language of § 103 places emphasis on an inquiry into obviousness, the general level of innovation necessary to sustain patentability remains the same." (at pp. 3, 4)

This Court stated that Thomas "Jefferson did not believe in granting patents for small details, obvious improvements, or frivolous devices. His writings evidence his insistence upon a high level of patentability." (at p. 9)

Hotchkiss v. *Greenwood,* 11 How. 248 (1851), was cited to involve a substitution of materials and the Court stated that:

> "[U]nless more ingenuity and skill . . . were required . . . than were possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention. In other words, the improvement is the work of the skillful mechanic, not that of the inventor." (at p. 11)

This Court stated we have been urged to find in § 103 a relaxed standard, however, the Court found that the standard has remained invariable in this Court. The Court further stated:

> "We conclude that the section was intended merely as a codification of judicial precedents embracing the

> *Hotchkiss* condition, with congressional directions that inquiries into the obviousness of the subject matter sought to be patented are a prerequisite to patentability." (at p. 17)

A. & P. Tea Co. v. *Supermarket Corp.*, 340 U.S. 147 (1950), was cited several times in *Graham* v. *John Deere Co., supra.*

In *A. & P.* it was held that one cannot take from the storehouse of known valuable knowledge and use same in a different specific setting and be entitled to invention.

> "The function of the patent is to add to the sum of useful knowledge. Patents cannot be sustained when, on the contrary, their effect is to subtract from the former resources freely available to skilled artisans. A patent for a combination which unites old elements with no change in their respective functions, such as is presented here, obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men. This patentee has added nothing to the total stock of knowledge, that has merely brought together segments of prior art and claims them in congregation as a monopoly." 340 U.S. 147, 152, 153

Accordingly this rule as applied in *A. & P.* and reaffirmed by *Graham,* was not applied by the Third Circuit which held that the admitted back-pressure in Wiedmann became invention when used substantially for the same function in a plastic injection device for providing a back-pressure on the plastic.

Petitioner's Expert Did Not Hail Willert's Invention

The Court of Appeals stated in its opinion that even Petitioner's expert hailed the Willert invention as a break-through in the particular field. It is clear error even to assume that Petitioner's expert praised the alleged Willert's invention; and the publication by Leslie J. Kovach, Vice-President of Petitioner, *does not mention Willert at all.*

This is brought out in Appendix E where the actual publication of Kovach is set opposite the footnote added by the Court of Appeals to its opinion.

Respondents Sell the Egan Machine Under the Patent in Suit, Though the Willert Patent Is Not Incorporated in the Egan Machine.

The District Court stated the following Findings of Facts in its opinion (pp. 51, 52):

1. "The Egan machine does *not* have means for selectively opening and closing the forward end of the passage, has *no* limit switch, but does have *a time delay in conjunction with a limit switch which is supplied upon conversion of the machine, by customers themselves*".
2. "The Willert patent *does not* teach delay".
3. "There is nothing in the Willert patent which provides for *stopping* the operation of the cycle. The Willert patent teaches that the reciprocating screw rotates *continuously*".
4. "Egan sought protection for the machine, which it manufactured, by selling it under the Willert patent".

In spite of these Findings of Facts by the District Court, the Court of Appeals for the Third Circuit found commercial success by the Willert patent, possibly because patentee forced 17 licensees into an agreement as Respondents attempted also with Petitioner. It was clear error by the Court of Appeals to assign commercial success to the Willert patent, since Willert had built only one experimental machine, which turned out to be a failure.

All Structural Features of the Willert Patent Disclosed in Prior Art

It is one of the Findings of Fact by Judge Wortendyke; as stated in the District Court opinion (App. A, p. 46) that

> "I find as a fact, *and it is conceded by the Plaintiffs*, that each of the structural features of the Willert patent is disclosed in the prior art."

In addition, Willert himself failed to disclose the meaning of the word "forcibly" as such in conjunction with the word "yieldingly" in the critical clause of each of the claims relied upon. Judge Wortendyke stated in this connection as follows:

> "Accordingly, says the defendant [Petitioner herein] if *Willert himself does not know what his invention is* and what 'forcibly' stands for, the claims in question are hopelessly invalid. Defendant properly states that *the public is entitled to know from reading the claims* (to which we add the specifications) 'where the scope of the protection ends in the Willert invention.'" (Emphasis added.)

If for no other reason, the statement made by Judge Wortendyke (App. A, p. 51) calls clearly for a reversal of the Judgment by the Court of Appeals, namely:

> "It has been recognized since Knapp v. Morss, 150 U.S. 221, 14 S. Ct. 81, 37 L. Ed. 1059, decided in 1893, that patentable invention consists in the embodiment of *new and useful means* to achieve a desired result and not in the *functions attributed* to the means. General Radio Company v. Superior Electric Company, 321 F.2d 857, 862 (3rd Cir. 1963) cert. denied 376 U.S. 973 (1964)." (Emphasis supplied.)

Conclusion

In conclusion, it is respectfully submitted that it is important to litigants, and beyond that the entire plastic machine industry, to have the questions of patent validity determined according to uniform decisions of this Hon. Court. It is important that the patent statutes be interpreted properly and that patentability be determined in accordance with the statutes and by some test or standard having requirements that are not outside of the statute or that have been eliminated by the statute. If the statutes are applied properly, this Hon. Court will find that the patent in suit does *not* meet the test of invention.

There was a clear finding by the District Court that the prior art device anticipated the patent in suit, and

that the prior art had the same action. Undoubtedly by improper application of the rules taught by the *Graham* cases, *supra,* the Court of Appeals for the Third Circuit arrived at the wrong legal conclusion.

The Court of Appeals went further, disregarding Rule 52 of the Federal Rules of Civil Procedure and the District Court's findings regarding the fact that the prior art structures were like the patent structure. They held that the application of "adjustable back pressure" in connection with plasticizing of plastic material amounts to invention in spite of Respondents' admission that such expedient was known then to the designer of plastic machinery.

To preserve the security under the law regarding patents that should be afforded by the decision of this Court, is of vast importance *to the entire* public, but particularly to all manufacturers of, dealers in, and users of machines, devices and commodities which are or may be covered by patents.

It is, therefore, respectfully submitted that this case is one calling for the exercise by this Court of its supervisory powers in order that conflict of decisions of a Federal question by the United States Court of Appeals for the Third Circuit may be removed, in order that important questions of Federal Law decided by the United States Court of Appeals for the Third Circuit may be settled by this Hon. Court, and to such an end a writ of certiorari should be granted, and this Hon. Court should review the decision of the United States Court of Appeals for the Third Circuit and finally reverse said decision and restore the decision of the District Court.

Respectfully submitted,

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APPENDIX A

Opinion

UNITED STATES DISTRICT COURT

DISTRICT OF NEW JERSEY

Civil Action No. 274-64

FRANK W. EGAN & COMPANY and
WILLIAM H. WILLERT,

Plaintiffs,

vs.

MODERN PLASTIC MACHINERY CORP.,

Defendant.

APPEARANCES:

TONER, CROWLEY, WOELPER & VANDERBILT, Esqs., By John A. Ackerman, Esq.

FISH, RICHARDSON & NEAVE, Esqs., By William K. Kerr, Esq., and David M. Plant, Esq. (New York Bar), Attorneys for Plaintiffs.

HARRY SOMMERS, Esq., By Ernest Montague, Esq. (New York Bar), Attorney for Defendant.

WORTENDYKE, District Judge:

In this action plaintiffs, Frank W. Egan & Company (hereinafter Egan) and William H. Willert (hereinafter Willert) charge the defendant, Modern Plastic Machinery Corp. (hereinafter MPM), with infringement of Claims 1 and 4 of United States Patent No. 2734226 (hereinafter

Willert patent), issued to Willert on February 14, 1956, on application filed March 5, 1952. Egan is the exclusive licensee of Willert under the patent. Egan is a New Jersey corporation, and Willert is a citizen of that State. MPM is a Delaware corporation, having its principal place of business in New Jersey, and is charged with infringement of the patent in suit by importing infringing plastics injection molding units and machines built in Germany, and selling and installing them in the United States.

MPM denies both the validity, and infringement, of Claims 1 and 4 of the patent in suit.

Jurisdiction and the appropriateness of venue are conceded, 35 U.S.C. § 281; 28 U.S.C. §§ 1338(a) and 1400(b).

Background of the Patent

A plastics injection molding machine consists of two basic units: the injection unit, to which the Willert invention relates, and the mold into which the plastic material is injected. The injection unit includes a feed hopper, a plasticizing and injection chamber and appurtenant control and power equipment. Plastics resin in pellet form is introduced through the feed hopper into the plasticizing chamber where it is melted and homogenized, and thence fed into the injection chamber. Subsequently, a quantity of the melted and homogenized resin is forcibly injected from the injection chamber into the mold. After completion of the injection, more plasticized resin is fed to the injection chamber in readiness for the next injection into the mold.

Since the 1930's, builders of plastics injection molding machines have endeavored to design a machine which would produce at a high rate of output a thermally stable melted resin having a uniform temperature and viscosity. However, for many years the sole means employed to attain this goal was the application of heat to the outside of

the plasticizing chamber. This means proved inadequate because the resin near the walls of the chamber would be too hot by the time the center of the plastics resin had heated sufficiently. The development of improved resins, and of new resins having properties which made them attractive for various end uses, merely increased the problems of attaining uniform temperature and viscosity. In addition, these new and improved resins were difficult to plasticize and to mold. It became clear that the key to successful molding was the proper plasticization of the resin to be molded, and that such proper plasticization could not be achieved unless improvements were made in the design of the injection cylinder. In 1948, prior to Willert's apparatus, there were approximately 4,000 plastics injection molding machines in operation in the United States. There were 15 domestic manufacturers of such equipment, and manufacturers in England, Germany, Switzerland, and Italy. Against this background, the patent in suit is considered.

Prior Art

A patent search obtained by Willert's attorney disclosed only U.S. Patent 2,359,839 issued to Goessling on October 10, 1944, on application dated December 21, 1942. This patent, with other prior art patents, was cited by the Patent Office in the patent in suit. Goessling's teaching related to machines for injection molding of plastics and to the mechanism for forcing heat-softened plastic material from an injection cylinder into a mold by means of a ram reciprocable in a cylinder. The principal object of the Goessling invention was to increase the plasticizing speed and capacity of the injection cylinder without lengthening the stroke of the ram, without loss of injection pressure, and without increasing the power required to operate the ram. There are many features of the Goessling machine

which are disclosed in that of Willert. For example, a fluid-actuated piston for reciprocating an injection ram or plunger; the piston being actuated by fluid pressure supplied to the cylinder through a port at each of the opposite ends thereof. In Goessling, as in the Willert patent, there is mounted, for rotary movement in the axial bore of the injection cylinder, a shaft continuously rotated. The shaft in Goessling is tubular, while that in the Willert patent is solid. In each of the machines, a granular or powdered molding compound is supplied to the annular space between the shaft and the wall of the bore of the cylinder in which it rotates from a feed hopper above and through an opening in the wall of the cylinder. The forward end of the rotating tubular shaft in Goessling has an external helical screw formed upon its circumference with a snug working fit in the bore of the cylinder. The ram in Goessling, which is reciprocable horizontally, moves within the axial bore of the tubular shaft and is tapered at the end toward the mold to provide continuous communication between the annular space surrounding the screw and the smaller ram-receiving end portions of the bore of the tubular shaft. The injection cylinder is heated, according to the Goessling specification, preferably by means of one or more electric band heaters which fit around the cylinder between the inlet opening and the discharge nozzle. The Goessling specification describes the operation of his device, in part, as follows:

> "Molding material flows from the feed hopper through the inlet opening in the heated injection cylinder into the annular space therein where it is engaged by the continuously rotating feed screw and is forced thereby between the tapered end of the tubular shaft and the tapered intermediate portion of the bore of the cylinder into the reduced outer end portion of said bore. During this forward movement of the mold-

ing material, the material is thoroughly mixed and uniformly heated to form a plastic or fluid mass, which fills the reduced forward end portion of the bore of the injection cylinder and the space left in the forward end portion of the bore in the continuously rotating shaft when the ram is retracted. When it is desired to fill the mold, the mold is moved into contact with the outer end of the discharge valve to place the discharge passageway thereof into communication with the entrance or gate of said mold, and fluid is admitted to the rear end of the plunger or ram actuating cylinder to force the ram forward. As the ram moves forward it enters the reduced forward end portion of the bore around the spreader and outwardly through the outlet passageway of the injection nozzle and through the discharge passageway of the valve into the mold. The piston is then moved rearwardly to retract the ram and the mold moves away from the valve permitting * * * [the valve] to close. In accordance with common practice, automatic controls (not shown) are provided so that the mold and ram are operated in proper timed relation and in repeated cycles."

Among the advantages which Goessling alleges are afforded by his device, he cites: increase in quantity of material plasticized in a given length of time without increasing the stroke of the injection ram; possibility of increase in diameter of cylinder without loss of injection pressure and without increase in power required to operate the ram; functioning of helical feed screw as conveyor to move the molding material forward in the injection chamber, exertion of relatively high continuous pressure on the material regardless of the position of the ram; thorough mixing of material and assurance of more uniform heating thereof; and elimination of devices previously employed to supply cylinder with accurately timed and measured charges of

molding compound. The obvious principal difference between the Goessling device and that of Willert is found in the fact that Goessling injects the plastic material by means of a plunger reciprocated axially through a tubular rotating screw which feeds the material from the hopper into the injection cylinder, while Willert uses his feed screw as plunger to inject the accumulated plasticized material into the mold. Would it be obvious to a mechanic familiar with the structure and operation of the Goessling device to substitute for Goessling's ram, reciprocating through his tubular feed screw, a reciprocating feed screw serving to inject as well as to feed? For reasons which I shall hereafter indicate, the answer to this question must be in the affirmative. Indeed, at the end of his specification, Goessling anticipates obvious modifications of his machine in the following language:

> "Obviously, the hereinbefore described injection molding machine admits of considerable modification without departing from the invention. Therefore, I do not wish to be limited to the precise arrangements shown and described."

Similarly, Willert contemplated variations in the details of his alleged invention by terminating his specification with the following language:

> "Whereas for purposes of illustration I have shown and described a preferred embodiment of the apparatus for plasticizing and delivering plastic material of the invention, particularly when it is employed in an injection molding machine, it is to be understood that such embodiment is illustrative only and that the invention is capable of considerable variation as to details."

U. S. Patent 2,402,805 (hereinafter Cousino '805) and 2,471,813 (hereinafter Cousino '813) issued respectively to

Appendix A

Cousino on June 25, 1946 and May 31, 1949, relate to improved injection molding apparatus for continuously injecting, under pressure, thermoplastic materials into a mold or through an extrusion die. Claim 2 of Cousino '805 discloses an "apparatus for injecting heat curing plastic compound into a mold having an inlet opening comprising an injecting unit including a discharge nozzle and pressure creating means for forcing plastic compound through said nozzle under pressure, said injecting unit including driving mechanism for said pressure creating means, means shiftably mounting said injecting unit for bringing said nozzle into and out of mold filling engagement with respect to said mold inlet opening, said injecting unit being shiftable under *back pressure applied thereon by said plastic compound when said mold is filled, and a control system for said driving mechanism, including a member responsive to movement of said injecting unit by said back pressure for discontinuing operation of said pressure creating means when said mold is filled.*" (Emphasis supplied) The stated objects of Cousino '813 include the provisions of a reversably driveable pressure-creating mechanism having improved valve means for interrupting the flow of material from the nozzle at the end of a discharge operation, and a shiftable screw member in the pressure-creating unit having an end portion fashioned to serve as a valve for obstructing unintended flow of material from the nozzle, as well as back-flow of material from the mold with which the nozzle is associated in operation. The disclosed device in that patent also provided a resilient means for yieldably urging the shiftable screw toward its valve closing position, adapted to accommodate shifting of the screw in a reverse, valve opening direction, under the action of the pressure created thereby on the material being injected.

U. S. Patent 2,493,805, issued January 10, 1950 to Dinzl, and cited in the application file of the patent in suit, also disclosed an improvement upon the conventional type of

injection molding machine in which a charge of granular molding material is forced through a heated injection cylinder under high pressure by a plunger to plasticize the material and deliver it to a mold where it is maintained under high pressure over a period of time, after which the plunger is retracted and the material in the mold allowed to cool while the plunger remains at rest, and an additional charge of material is fed to the injection cylinder. The specifications of Dinzl state that the plunger is operated hydraulically, and pumping equipment is employed to develop the hydraulic pressure required for its operation. The pumping equipment is actually made use of only during the injection and retraction strokes of the plunger, but operates continuously. Claim 1 of Dinzl's improvement patent describes an injection cylinder having a nozzle at one end, a plunger reciprocable in said injection cylinder, and a reciprocating hydraulic system. The claim defines the reciprocating hydraulic system as "a source of hydraulic fluid under pressure, means for utilizing said hydraulic fluid to force said injection plunger toward the injection cylinder nozzle, means biasing the injection plunger against return movement after completion of the injection stroke, means effective upon completion of the injection stroke of the injection plunger to utilize said hydraulic fluid to effect reciprocation of the filling plunger thereby introducing plasticized molding material into said injection cylinder and causing return of the injection plunger *under pressure exerted by the introduced molding material,* and means effective upon completion of the return of the injection plunger to discontinue reciprocation of said filling plunger, and lock the same against movement." (Emphasis supplied) A self-closing limit switch is opened by the plunger at the limit of its retraction stroke. A self-opening limit switch and a self-closing limit switch are actuated by the piston of the hydraulic motor. These switches are so arranged

that the self-opening switch is closed by the piston at the end of its forward stroke and the self-closing switch is opened by the piston at the end of its retraction stroke.

The plastic molding apparatus described by Willcox in his application filed October 27, 1950 for Patent 2,629,132 (hereinafter Willcox), issued February 24, 1953, received thermoplastic material fed from a hopper, heated the material, and extruded or injected the material into a mold. The specification pointed up, among the disadvantages of prior art devices, the difficulty in attaining temperature control over various parts of the apparatus in order to achieve adequate plasticizing without overheating and burning, and to avoid material buildup in, or clogging of, the injection apparatus. A further difficulty was said to have been encountered in the prior art in effecting an adequate plasticizing of the material and in eliminating trapped air from the molded product. Willcox taught "an apparatus for plasticizing and feeding thermoplastic material comprising a plasticizing head defining an elongated passage, a cylindrical bushing at the forward end of said passage, inlet means for introducing thermoplastic material into said passage near the other end thereof, an elongated member received within said passage, and including an intermediate threaded portion, the forward and rearward ends of said elongated member being unthreaded, with a portion of the unthreaded rearward end extending into said passage adjacent said inlet means * * *, means supporting said member for rotation and reciprocating movement with respect to said head to move said material along said passage under the action of said threaded portion and to eject the material from the forward end of said passage upon longitudinal movement of said member, * * *."

In addition to the foregoing prior art patents, there was cited by the Patent Office in the Willert application

proceedings an Italian patent No. 420839 (hereinafter Italian patent), issued March 9, 1947 to Quillery, disclosing apparatus for the manufacture of molded rubber objects. That apparatus is described in claim 5 of the Italian patent as an injection press for the manufacture of molded rubber objects by introducing, by injection under pressure, a rubber mix into a mold which has been previously closed and maintained at a high vulcanization temperature. The apparatus comprises heating plates making it possible to maintain the mold closed during the injection at a high temperature, and an injection container combined with a piston preferably cooperating with a heating system. The injection piston consists of a rotatable screw within a cylinder, and is "movable parallel to itself so as to force into the mold the mixture which has passed through said screw." The Italian patent, as translated, explains that "[D]uring its introduction, the mix is mixed and subdivided especially by its passage through the plate 23 and then, thus freed of the occluded air, it undergoes an ultra-rapid vulcanization in the mold." The effect of the "mix" upon the longitudinal movement of the "screw" is described as follows: "It will be understood that the rubber mix introduced into the opening 36 is subdivided by the screw 35 and is accumulated, during the period of time between two injections in the lower part of the container 16, which results in the lifting of said screw at the same time as the lifting of the piston 29. At the moment when the chamber 28 is placed under pressure, the mix which has thus been heaped together is in sufficient quantity and the piston 29 moves the screw 35 downward, exerting the same effect as the piston 25 in Fig. 1, namely pushes the said mixture through the plate 23 from where it passes into the conduit 18 and effects the injection, as has been described when discussing the first embodiment, of a mix which is freed of occluded air." It should be observed that the

screw 35 and piston 29 are disposed vertically in succession above the opening 36 in the Italian patent drawings.

In addition to the prior art cited by the Patent Office, defendant cites a German patent application No. 176425 Xii 39a,[1] dated December 15, 1943, by I. G. Farbenindustrie Aktiengesellschaft, describing an injection molding machine for thermoplastics, consisting of an injection cylinder within the bore of which is a continuously rotating screw which conveys the composition charged through a filling opening in the cylinder wall toward a nozzle at the end of the cylinder into a mold. The injection cylinder is externally heated. The molding composition, after leaving the conveyor screw, passes into a space within the cylinder in front of the screw where it is mixed to equalize temperature differences in the composition, and thence passes into the front portion of the injection cylinder where it collects periodically and whence it can be injected into the mold as required. The injection is effected by bringing the mold against a movable section of the injection cylinder causing that part to slide to the right against a stop and thus forcing the accumulated "shot" of plasticized material to emerge from the nozzle and pass into the mold (much as tooth-paste is forced out of its tube by folding or squeezing the tube). After the completion of the injection, the movable section of the cylinder is forced back, i.e., to the left, into its initial position by the composition which has been conveyed forward in the meantime. In another embodiment of the Beck device the change in the shot capacity of the injection cylinder is effected by an axial displacement of the rotating screw whose support is made axially movable and is displaced by a sufficient force in the filling direction upon the commencement of the injection process.

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[1] A copy of which, in the collections of the United States Library of Congress, became available to the public on July 11, 1947.

The rearward movement is effected automatically by the composition which is continuously conveyed into the free cavity of the cylinder.

In an article in Kunststoffe, entitled "Increasing the Capacity of Injection Molding Machines by Preplasticizing", published in German in 1951, Beck describes a preplasticizing machine manufactured by Hydraulic Press Manufacturing Co. (HPM) which "uses the [feed] screw directly as *injection plunger* so that * * * the plasticizing screw can be operated continuously * * * [and] makes it possible to color the compound homogeneously at the same time directly in the machine so that the dry coloring method * * * can be dispensed with as an additional operation, and * * * homogeneous colorings can also be obtained." (Emphasis supplied)

The references, upon which MPM relies for support of its contentions that the Willert device did not amount to invention, were disclosed in the prior art. There were six patents and one patent application in the plastics injection molding machine field. There were three other references: the Wiedmann patent and the Tyler patent in regard to hydraulic systems and devices; the Vorraber patent, which disclosed an apparatus for the manufacture of artificial stones and bricks, but introduced by defendant in an attempt to show that it taught elements of the Willert claims. The alleged inventor was chargeable with knowledge thereof. *Zero Mfg. Co.* v. *Mississippi Milk Producers Ass'n.*, 232 F.Supp. 720, 724 (S.D. Miss. 1964) aff'd. 358 F.2d 853 (5th Cir. 1966) cert. filed August 4, 1966. The references which relate to plastic molding disclose features of the Willert device which, in combination, perform functions similar to those performed by them in the Willert combination. For convenience in relating the elements of the Willert device to corresponding elements disclosed in the prior art references, MPM has set forth in its post-

trial brief, in parallel columns, each of the Willert elements and the allegedly corresponding prior art references.[2] This convenient presentation of the features of the claims in suit as compared with the disclosures of the prior art references is as follows:

Willert Device	*Prior Art Disclosures*
A plastic material plasticizing and delivering mechanism comprising	
(a) a barrel having a passage extending longitudinally therein.	Cousino 2,471,813 (D-9), Goessling (D-13), Vorraber (D-12), Cousino 2,402,805 (D-6), Willcox (D-7), Italian patent (D-5).
(b) a rotatable and reciprocable screw for feeding plastic material toward the forward end of the screw.	Cousino 2,471,813 (D-9), Goessling (D-13), Vorraber (D-12), Willcox (D-7), Italian patent (D-5).
(c) means for feeding plastic material between the screw and the wall of the passage at a point spaced from the forward end of the screw.	Goessling (D-13), Vorraber (D-12), Willcox (D-7), Italian patent (D-5).
(d) means selectively opening and closing the forward end of the passage.	Cousino 2,471,813 (D-9), Vorraber (D-12), Cousino 2,402,805 (D-6), Willcox (D-7).
(e) means for rotating the screw.	Cousino 2,471,813 (D-9), Goessling (D-13), Vorraber (D-12), Cousino 2,402,805 (D-6), Willcox (D-7), Italian patent (D-5).

[2] Defendant's Post-Trial Brief, page 19.

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Willert Device	*Prior Art Disclosures*
(f) means for selectively forcibly but yieldingly opposing reciprocation of the screw in the passage in a rearward direction.	Cousino 2,471,813 (D-9), Goessling (D-13), Tyler (D-10), Widemann (D-8), Vorraber (D-12), Willcox (D-7), Italian patent (D-5).
(g) and means responsive to a pre-determined length of travel of the screw in a rearward direction for positively thrusting the screw in the passage in a forward direction to feed the plasticized material out the forward end of the barrel.	Vorraber (D-12), Dinzl (D-11).

PATENT IN SUIT

Willert, the inventor named in the patent, had been employed by MPM in 1948 and 1949; performing technical service work consisting of setting up MPM's plastic extruder machines and doing detail work in its engineering department. In April 1950, he became an assistant to the General Manager of Hartig Engine & Machine Co. (Hartig). Hartig was then engaged in the manufacture of extrusion machinery and auxiliary take-off equipment. From that employment, Willert transferred to Egan in August 1952. It was during his employment at Hartig, in March 1952, that the first application for the patent in suit was filed. Willert described the embodiment of his apparatus as "an in-line reciprocating screw plasticizer with adjustable back pressure used for injection molding of thermoplastic materials." He explained that the means for controlling the amount of material plasticized and injected into the mold consisted of "the travel of the screw

in a rearward direction that is controlled so that the plastic charge in front of it [the screw] is accumulated, • • • to what you want to shoot in the mold." The idea of a reciprocating screw occurred to him in 1950, in consequence of hearing a lecture on a plasticizing unit at a meeting of the Newark (New Jersey) section of the Society of Plastic Engineers. The unit described in the lecture employed a two-stage plunger system, by which the material was plasticized in the first stage, and accumulated as a charge and forced into the mold in the second stage. That process suggested to Willert that if he could combine the plasticizing action of an extruder with the action of an injection molding machine, he would achieve a superior device for the accomplishment of injection molding. He accordingly consulted patent counsel for whom he prepared in August 1951, a written description of his idea together with an illustrative schematic drawing. That document, Exhibit P-14, described and illustrated his disclosure of the function and cycle of performance of his extrusion-injection cylinder. The following language is quoted from that exhibit:

> "The prepared thermoplastic compound • • • granules, are placed in hopper (1). It falls or is fed to the extrusion screw (2). The material is forced forward in [leftward] direction (A) by the motion of the screw. The screw is turning in a clockwise direction at all times • • • by the torque applied at (3) by an external motor • • •. The cycle begins with the screw in the most forward position direction A or that allowed by the accumulating cylinder or reservoir (4). In this position the reservoir is completely filled by the screw. As the material is conveyed down the extrusion cylinder (5) which is externally heated by electrical heaters (6) (but not limited to this method) it is softened. The amount of softening or plasticiza-

tion is determined by the degree of heat, rpm of the screw, and pressure. All these factors would be controllable on a production unit. As the plastic moves forward pressure is increased in the reservoir (4) with the cut-off valve (7) closed so as not to allow material to move beyond it. This causes a thrust in [rightward] direction 'B' on the screw. This thrust load is taken up by the bearing and housing assembly (8). Behind this housing is so located a hydraulic or injection cylinder (9). By controlling the pressure on each side of the piston, it is possible to control the load [sic] the screw is allowed to retreat in direction (B). The amount of load will be determined by the pressure needed to produce a solid mass of homogeneous and thoroughly plasticized compound free of air or voids in the reservoir (4). The screw is allowed to retreat a distant [sic] equivalent to produce a reservoir ahead of the screw in volume equal to or slightly greater than that needed for the cavity of the die (not shown). When the above is accomplished and the mold (not shown) is in position the cut-off valve is opened. At the same time, the screw is forced forward, direction A, by the hydraulic injection cylinder. The now plasticized material collected ahead of the screw is forced forward thru the nozzle (10) and into the die. The construction, movement, cycling, and fitting of the die is the same procedure used on the conventional units. Should the capacity of the reservoir be less than that of the die, the valve could remain open and the screw continue to feed hot material into the mold. When the proper pressure is built up to completely fill the mold, the valve closes and the unit goes thru the same cycle as described above. • • •"

Willert caused an injection unit to be designed and built in accordance with his ideas, and this device was tested

on, or shortly prior to, May 17, 1954. The testimony indicates that the operation of the machine was very encouraging although it failed to mold an acceptable part because of some mechanical difficulty and excessive heat in the extrusion cylinder. During that test, "back pressure" was employed on the device but, for lack of a pressure gauge, the pressure at which the screw was allowed to retreat was a matter of guesswork. The manufacturer of Willert's device, Reed-Prentice Corporation, ultimately lost interest in this machine because of mechanical difficulties encountered. Thereafter, Egan sought, and obtained, an exclusive license under the patent in suit, which had issued in the meantime.

The alleged novel features of the combination described in the claims relied upon were characterized by the plaintiffs at the pretrial conference as "* * * an improvement in an injection molding machine of the type in which a rotating reciprocating screw is used to plasticize and to inject plasticized material. The improvement covered by the claims is found in the specific arrangement in which a charge of molten plastic of a pre-determined size is accumulated at the front of the screw and in which the charge * * * as it accumulates forces the screw backward against an adjustable back pressure. * * * [T]he screw takes pellets of plastic material, plasticizes them, [and] moves them forward to a position in front of the screw [thus] creating a reservoir of molten plastic material at the front end of the barrel in front of the screw [.] [A]s the molten plastic material accumulates at the front of the [reciprocating rotating] screw it forces the screw backwards against an adjustable back pressure. When the screw reaches a predetermined position during its travel backwardly or rearwardly it is then thrust forward to inject the molten plastic material into the mold.'"

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[1] See transcript of pretrial conference of April 8, 1965 at pages 2-3.

Appendix A

In support of its denial of the validity of the claims of the patent here relied upon, MPM contends that (1) the Commissioner failed to cause a proper examination of the prior art to be made; (2) that Willert was not the original inventor; (3) that the claims relied upon fail to disclose novelty in the light of the prior art; (4) the device described in the claims relied upon would have been obvious to a person skilled in the prior art; (5) plaintiffs are estopped by the application file wrapper; (6) there were false representations made by the inventor to the Patent Office during the prosecution of the application; (7) the alleged inventive features are anticipated in the prior art.

With respect to "controlling back pressure" in the injection unit of the Willert device, plaintiffs contend that "the rotating screw simultaneously plasticizes and moves the resin fed to it from the hopper toward the forward end of the screw" and "by accumulation of the plasticized charge in the barrel in front of the screw causes the screw to move rearwardly. This rearward movement of the screw is opposed by a constant, selected hydraulic force, or 'back pressure'. Selection of a back pressure which is appropriate for the resin being molded produces superior mechanical working of the resin and in turn the proper plasticization, homogenization, and degassing of the plastic material."

Plaintiffs concede that Claims 1 and 4, upon which they rely, are practically identical, and disclose "a plastic material plasticizing and delivering mechanism comprising (a) a barrel having a passage extending longitudinally therein; (b) a rotatable and reciprocable screw for feeding plastic material toward the forward end of the screw; (c) means for feeding plastic material between the screw and the wall of the passage at a point spaced from the forward end of the screw; (d) means selectively opening

and closing of the forward end of the passage; (e) means for rotating the screw; (f) means for selectively forcibly but yieldingly opposing reciprocation of the screw in the passage in a rearward direction; (g) means responsive to a predetermined length of travel of the screw in a rearward direction for positively thrusting the screw in the passage in a forward direction to feed the plasticized material out the forward end of the barrel." Plaintiffs do not contend that any of the foregoing structural elements of the Willert patent are new. They do assert, however, that "Willert's combination of these old elements produced for the first time an in-line reciprocating screw injection molding unit *in which the size of each successive shot can be simply and accurately controlled, and in which an appropriate pressure for resisting rearward movement of the reciprocating screw can be conveniently selected and fixed.*" (Emphasis supplied) In short, plaintiffs state that "the crux of the Willert invention is this adjustable back pressure which resists the rearward movement of the screw."

As initially filed in the Patent Office on March 5, 1952, Willert's application contained 12 claims, all of which were rejected by the Examiner as unpatentable over the Italian patent, in view of Cousino '805. In his letter of rejection of the application, the Examiner pointed out that the Italian patent "shows a rotatable, reciprocable screw * * *, means for rotating the screw * * *, and means for opposing backward movement to (sic) the screw and for thrusting the screw forward * * *. Cousino shows the use of a valve in an injection nozzle. No invention is seen in mounting a valve such as that shown by Cousino in the injection nozzle of the Italian patent. Any other features which the claims recite, i.e., control mechanism, are held to be *mere matters of design* over the references. The *functional statements* contained in the claims *do not lend patentability to the*

claims" (Emphasis supplied). Responsive to this rejection, the applicant amended his twelve claims as filed, and added thereto a thirteenth claim. Insofar as the claims (1 and 4) presently relied upon by plaintiffs are concerned, each was amended by inserting therein, following the word "selectively", the words "forcibly but" in the phrase "means for selectively yieldingly opposing reciprocation of the screw in the passage in a rearward direction, * * *". Thus, the phrase, as amended in the claims of the patent as issued, reads "means for selectively forcibly but yieldingly opposing reciprocation of the screw in the passage in a rearward direction." Upon this phrase, as so amended by conjoining the adverbs "forcibly" and "yieldingly" to describe the opposition to the rearward reciprocation of the screw, the asserted validity of the patent in suit depends. The thirteen claims of the application as amended were again rejected by the Examiner in his letter mailed to applicant's attorney on December 15, 1953. After citing, as additional references, Dinzl and Willcox, the letter rejected Willert's claim 1 as unpatentable "over the Italian patent" and rejected claims 2-13 as unpatentable "over the Italian patent in view of Cousino alone or with the addition of Dinzl." The Examiner held, with respect to claim 1, that "the gravitational force opposing reciprocation of the screw of the Italian patent is the equivalent of applicant's 'means for forcibly but yieldingly opposing the reciprocation of the screw.'" Regarding claims 2-13, the rejection letter states:

> "The Italian patent shows the general structure set forth. No invention is seen in adding a valve such as shown by Cousino to the apparatus of the Italian patent. In regard to control means specified in the claims, it is held that it would not amount to invention to operate the apparatus of the Italian patent automatically. * * * Since the screw is the only moving

part of the apparatus of the Italian patent which indicates when the proper amount of material has been charged to the injection chamber, it would be obvious to use movement of the screw to control the automatic operation of the injection ram. This is particularly true since Dinzl discloses the actuation of a switch to actuate a control circuit, which actuation is caused by rearward movement of the injection ram. Therefore no invention is seen in controlling the operation of the apparatus of the Italian patent automatically, the control means being responsive to the rearward movement of the screw."

Upon notification of this second rejection of his application, Willert requested that his claims numbered 1, 3, 4, 7 and 10 be cancelled, and that two claims, numbered 14 and 15, be added to his application. This left claims 2, 5, 6, 8, 9 and 11-15 in the application as of June 11, 1954. Upon further written argument by the attorney for the applicant, these claims were allowed on September 8, 1955, without further comment by the Patent Office. They became claims 1-10 inclusive of the patent, which issued February 14, 1956. In support of his application amendment of June 11, 1954, Willert's attorney contended, in part, as follows:

"The structure of the Italian patent does not include 'means for forcibly but yieldingly opposing reciprocation of the screw.' Quite plainly the force of gravity is not a means; there is no mechanism in the Italian patent which can be interpreted in any warranted manner as responding to such means. The Italian patent does not show any means for selectively opening and closing the delivery end of the passage, nor does it show any means responsive to a predetermined length of retreating motion of the feed screw either to open the path of communication between the mecha-

nism and the mold for positively thrusting the screw in a forward direction to feed the plasticized material out the forward end of the barrel and into the mold, or to effect the combination of such results. It is contended, therefore, that the Italian patent plainly lacks a teaching of the combination set forth in the claims directed to the plasticizing and delivering mechanism, as well as the claims drawn to the injection molding apparatus * * *. It has been found, in the use of applicant's apparatus, that an opposing force far in excess of that which would be exerted by gravity on the movable parts, if the apparatus were disposed vertically, is necessary to produce satisfactory molded objects. Thus, the Italian patent by itself does not supply an answer to applicant's problem [air bubbles in the plastic material collected in the forward chamber resulting in porosity of the molded article] * * *."

Applicant further argued that a combination of the teachings of the Italian patent with those of Cousino '805, or with those of Cousino '805 and Dinzl, is unwarranted because of lack of a reference showing the basic combination claimed of the differently operating devices disclosed by the respective patents referred to. Thus, from the time of his first amendment of his application, Willert consistently, and with ultimate success in the Patent Office, maintained that the embodiment in a reciprocating, rotatable screw plasticizer of "means for controlling back pressure and controlling the shot size", producing "a properly homogenized and melted [predeterminable] amount of plastic" amounted to invention over the prior art. The defense of file wrapper estoppel, urged at the pretrial conference, is apparently, and will be treated as, abandoned.

The evidence fails to support defendant's contention that Willert made false representations to the Patent Of-

fice during the prosecution of, and with respect to, the application. If such contention is predicated upon the conceded error in the description of the operation of certain valves in the hydraulic reciprocation system of the Willert device, I reject the contention in the light of the law and the facts. The operation which was intended, despite the discrepancies in the specifications, was obvious to plaintiffs' expert, Egan, and to defendant's expert, Goldberg, and enabled MPM to construct and demonstrate to the Court an operable machine in accordance with the intended Willert specification. It is sufficient if the claims, read in the light of the specifications, reasonably apprise those skilled in the art both of the utilization and scope of the invention. *Georgia-Pacific Corp.* v. *United States Plywood Corp.*, 258 F.2d 124, 136 (2nd Cir. 1958) cert. denied 358 U.S. 884 (1958), cited with approval in *Jones Knitting Corp.* v. *Morgan*, 361 F.2d 451, 454 (3rd Cir. 1966).

The essential elements of each of the two claims relied upon are stated in each in identical language, viz.:

> "* * * means selectively opening and closing the forward end of the passage, means for rotating the screw, means for selectively forcibly but yieldingly opposing reciprocation of the screw in the passage in a rearward direction, and means responsive to a predetermined length of travel of the screw in a rearward direction for positively thrusting the screw in the passage in a forward direction to feed the plasticized material out the forward end of the barrel."

As MPM correctly points out in its post-trial brief, the Willert device comprises two basic elements, viz.: a barrel having a reciprocating screw whose continuous rotation feeds plastic material into a reservoir and mold, and a hydraulic system by means of which the injection and retraction strokes of the screw are impelled. Both of these

features were old in the art, particularly the control means of the hydraulic system, which include the opening and closing of the valve between the reservoir and the mold in operating relationship with the valves which control the reciprocation of the piston in the hydraulic cylinder. Commencing with line 33 in column 4 of the specifications of the patent in suit, we learn that "a shut-off valve 80 is provided in the bore through the nozzle portion, such valve being operated by the hydraulic cylinder 82 *in a conventional manner.* (Emphasis supplied) When the entire unit 16 has been thrust to the left * * *, the forward end of the nozzle sealingly contacts the outer end of the passage 84 in the mold part 12, as diagrammatically indicated in Fig. 2. When this occurs, the mold parts 12 and 14 will have been forcibly clamped together so that plastic material may be injected by the rotating and reciprocating feed screw 36 upon the opening of valve 80 and upon the thrusting of the feed screw toward the mold." It will be noted that the means for clamping the mold parts together are not specifically described or claimed as part of the invention. Such means were old in the art and so recognized in the Goessling patent. In the Goessling application of December 21, 1942, column 2 line 55 of the specification states: "*In accordance with common practice,* automatic controls (not shown) are provided so that the mold and ram are operated in proper timed relation and in repeated cycles." (Emphasis supplied) Willert describes a typical operating cycle of his apparatus as follows:[4] "With the [cut-off] valve 80 opened, the plasticized resin is allowed to emerge from the nozzle * * *. Valve 80, the cylinder 82 of which is controlled by a suitable solenoid operated valve 112, is now closed, thereby stopping the flow of plasticized material from the nozzle. [The granulated plastic com-

[4] Specifications, column 5, line 47 through column 6, line 31.

pound is flowing through the throat of the hopper and being forced forward in the barrel by the continuously rotating screw.] * * * By the time the thermoplastic material * * * reaches the end of the screw it is thoroughly plasticized, by reason of its continually being worked between the screw and the bore of the barrel and its subjection to heat within the heated barrel. Since such plastic material cannot pass out of the nozzle, valve 80 then being closed, it is deposited ahead of the screw in the space or reservoir 39, thus causing a thrust load upon the screw in a direction to the right. Such thrust load causes the screw 36 to retreat in a direction to the right, thereby leaving an increasingly larger reservoir 39 for the accommodation of the plastic material forwarded by the feed screw. The amount of such accumulation of plasticized material depends upon the mold capacity. The force at which the screw will retreat is controlled by the hydraulic cylinder 56, to which the screw is connected through the medium of carriage 50. Referring to Fig. 4, at the described portion of the operating cycle valve 94 is closed, valve 98 is open, and pressure relief valve 100 is set so that the feed screw retreats under a given thrust load. During the retreating of the screw the oil from the cylinder 56 runs through pipes 90 and 102 back to the tank 88. During this interval of time, the separable mold parts are placed together, the mold being placed in such position relative to the plastic material injecting mechanism as to be filled thereby. When sufficient material has accumulated in the space or reservoir 39 ahead of the end of the feed screw, the carriage 50 will have retreated far enough to operate the limit switch 110 * * *. Thereupon, * * * the valve 94 is automatically opened, the valve 98 is automatically closed, and the piston 58 is subjected to high pressure, whereby to thrust the carriage 50 and the feed screw 36 toward the position at the extreme left. During such time, of course, the feed screw 36 continues to rotate, so that upon the completion of one

cycle and the closing of valve 80 the closing of valve 94 and the opening of valve 98 the above described cycle will be repeated."

Patentability requires a showing, in regard to the matter sought to be patented, of novelty, utility, and nonobviousness to a person having ordinary skill in the pertinent art. "The emphasis on nonobviousness is one of inquiry, not quality * * *". *Graham* v. *John Deere Co.*, 383 U.S. 1, 17 (1966). In conformity with the dictates of 35 U.S.C. § 103, as enunciated in *Graham*, I am required to examine the scope and content of the prior art; ascertain the differences, if any, between the prior art and the claims at issue; and resolve the level of ordinary skill in the pertinent art. *Ibid.* In this manner, the question of obviousness must be decided. There is also a question as to the novelty of the patent in suit, but what will be said as to obviousness will be dispositive of this case.

It is pointed out by defendant that the testimony of Willert himself failed to disclose the meaning of the word "forcibly" as used in conjunction with the word "yieldingly" in the critical clause of each of the claims relied upon. Accordingly, says the defendant, if Willert himself does not know what his invention is, and what "forcibly" stands for, the claims in question are hopelessly invalid. Defendant properly states that the public is entitled to know from reading the claims (to which we add the specifications) "where the scope of the protection ends in the Willert invention".

It is obvious to the Court, and I find and conclude, that the rearward reciprocation of the screw results from the pressure created by the progressive accumulation of plasticized material in the reservoir to the left of the screw. That pressure is partially counteracted by the narrowness of the outlet through which the hydraulic fluid is being forced by the movement of the piston in the

cylinder to the right. That counteracting pressure is manually regulated by the setting of the valve 100 controlling the rate of outflow of the hydraulic fluid from the orifice 62 through the valve 98 into the sump 88. The pressure opposing reciprocation is "yielding" by reason of the simple fact that the orifice 62 and the valves 98 and 100 permit the *gradual* exit of the fluid and consequently the *gradual* reciprocation of the screw.

I find as a fact, and it is conceded by the plantiffs, that each of the structural features of the Willert patent is disclosed in the prior art.

Willert items designated (a), (b), (c), (d), (e) and (g) above were old in the art.[5] Item (f) refers to unspecified "means" for opposing reciprocation of the screw in a manner characterized by the adverbial phrase "selectively forcibly but yieldingly". This phrase purports to *describe the manner* in which the retreat of the screw takes place. Claims 1 and 4 of the patent in suit do not *explain* this purported description of the manner in which the screw retreats. We will, however, refer to the specifications. Ordinarily, claims should be construed in the light of the specifications and drawings. However, patent claims which do not *define* the invention cannot be aided by reading into them parts of the specifications or of other claims. *White Machine Co.* v. *Bon Ton Cleaners & Dyers,* 190 F.Supp. 807, 810 (D.N.J. 1961).

According to the specifications,[6] the plastic material cannot pass out of the nozzle when valve 80 is closed, but is deposited ahead of the screw in the space or reservoir 39. This causes a thrust load upon the screws in a direction

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[5] Even if it is conceded, as plaintiffs contend, that the Vorraber patent teaches nothing which would affect the validity of the Willert patent, this would not minimize what I say hereinafter.

[6] Column 5, line 62, *et seq.*

to the right. As the screw retreats in that direction it leaves an increasingly larger reservoir behind [to the left of] it for the accommodation of the plastic material forwarded by the continuously rotating screw. The specification states that the amount of accumulation of plasticized material in the reservoir depends upon the mold capacity. That statement is not accurate. The actual obvious fact is that the amount of accumulation of plasticized material to the left of the screw depends upon the distance through which the screw retreats to the right, and that distance depends upon the position at which the limit switch (110) is manually placed to both limit the rearward movement of the screw carriage and to initiate the injection stroke.[1] As correctly stated in the specification, the limit switch is adjustable longitudinal of the bed along which the screw carriage travels so that the switch will be closed by contact by the carriage "* * * when the latter has traveled a predetermined distance to the right. As a result the volume of the plastic material receiving reservoir 39 may be adjusted so as substantially to equal the volume of the mold employed." The closing of the limit switch operates the solenoid of a valve which hydraulically opens valve 80 which allows the plasticized material in the space or reservoir 39 in advance of the feed screw to flow into the mold. The closing of the limit switch (110) also operates valves in the hydraulic system whereby oil under pressure moves the piston forward and thus thrusts the feed screw to the left which forces the plastic material out of the reservoir and injects it into the mold. The specifications correctly state: "The force at which the screw will retreat is controlled by the hydraulic cylinder 56, to which the screw is connected through the medium of carriage 50."

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[1] See Specifications, column 5, lines 1-8.

That force is limited by setting a pressure relief valve (100) to a given thrust load for the retreat of the feed screw. Nowhere else in the Willert specifications or claims is to be found an explanation of the phrase "means for selectively forcibly but yieldingly opposing the reciprocation of the screw in the passage in the rearward direction." It appears obvious to the Court that, in the operation of the Willert device, the limit switch is set at a point in the rearward path of travel of the screw carriage so as to equalize the volume of the reservoir space to the left of the screw with the estimated capacity of the mold. Thus, when the plasticized material in the reservoir substantially equals the capacity of the mold, the rearward travel of the screw ceases upon the tripping of the limit switch, and the screw, with its carriage and motor, is hydraulically forced to the left, thereby serving as a plunger to inject the accumulated quantity of plasticized material into the mold. It is therefore by means of the functioning of the hydraulic system, actuated by the pressure of the accumulation of material in the reservoir, and the respective settings of the limit switch and of the pressure relief valve, that the reciprocation of the screw is opposed selectively forcibly but yieldingly. The operation is induced selectively by the settings at which the limit switch 110 and pressure relief valve 100 are manually adjusted. The accumulation of the plasticized material in the reservoir forcibly impels the retreat of the screw, and the ratio between cross-section of the outlet 62 in the cylinder head to the volume of the hydraulic fluid between it and the piston head serves as the yielding cushion against which the piston head retreats.

Plaintiffs seek to overcome defendant's plea of obviousness under Section 103 by asserting that the prior art failed to teach or to suggest the use in an injection molding machine of "adjustable back pressure", a feature

which allegedly adds so conspicuously to the performance of the Willert machine.[8] Nevertheless, in a footnote on the same page, plaintiffs state: "The structure for applying an adjustable back pressure to a reciprocating screw was then [1950 and 1951] available (e.g., Wiedmann (D-8), Fig. 1, valve 10 and associated hydraulic circuitry) to any plastics injection molding machine designer who wanted to incorporate that feature in his machine." Wiedmann's hydraulic transmission patent, therefore, was a structural element old in the art and, as such, is a proper reference for determining obviousness of the claims in suit. See *Gould-National Batteries, Inc.* v. *Gulton Industries, Inc.*, 361 F.2d 912, 914 (3rd Cir. 1966). Section 103 of the Act expressly contemplates that the "subject matter sought to be patented and the prior art may differ" and yet render obvious the subject matter as a whole. Further, an invention may be new in the sense that nothing like it has previously existed, but if the difference between the new thing and that which was known before is not sufficiently great, requiring only the application of mechanical skill, then there may yet not be patentability. *Skee-Trainer, Inc.* v. *Garelick Mfg. Co.*, 361 F.2d 895, 899 (8th Cir. 1966). Willert claims novelty in the embodiment "in a reciprocating, rotatable screw plasticizer" of "means for controlling back pressure and controlling the shot size." He provides an appropriately-sized charge of plastics material in front of the rotating screw by regulating the length of rearward travel of the screw by manual adjustment of the tripping switch, limiting the retreat of the carriage bearing the screw and its power sources. Such a combination does not rise to the level of patentability. The opposition of the rearward movement of the screw by a constant, selected hydraulic force, or "back pressure", appropriate for the

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[8] Plaintiffs' brief, p. 43.

resin being molded, by means of the manual adjustment of the pressure relief valve in the appurtenant hydraulic circuitry of the Willert device would be a necessary physical consequence of the functioning of the elements of the combination, and the result of mechanical skill rather than inventiveness. Wiedmann's U.S. Patent 2,397,395, issued March 26, 1946, disclosed hydraulic transmission having means to impose a back pressure upon the motor thereof and means to remove or reduce the back pressure in response to a predetermined increase in the motor load. It claimed, in part, "a hydraulic transmission having a hydraulic motor, a pump for delivering motive liquid to said motor to energize the same and a resistance normally effective to resist the discharge of liquid from said motor to thereby impose a back pressure upon said motor * * *." Willert's "back pressure" is created and regulated by the hydraulic system appurtenant to, but not claimed as an element of, his invention. The teaching of Wiedmann forms part of the prior art relevant to the issue of obviousness. *Skee-Trainer, Inc.* v. *Garelick Mfg. Co.*, supra, at 898, where the Court stated: "* * * 'prior art' may include not only earlier devices and publications but also similar devices whether or not in related areas to the patented device and with respect to a simple mechanical device utilizing universally known principles permits referring to the field of mechanics itself."

The "means for selectively forcibly but yieldingly opposing reciprocation of the screw in the passage in a rearward direction" and the "means responsive to a predetermined length of travel of the screw in a rearward direction for positively thrusting the screw in the passage in a forward direction to feed the plasticized material out of the forward end of the barrel", referred to in Claims 1 and 4 of the patent in suit, do not constitute patentable invention, and the description of their functioning was obvious in the

light of the prior art to which the device described in the patent belongs. "It has been recognized since *Knapp* v. *Morss*, 150 U.S. 221, 14 S.Ct. 81, 37 L.Ed. 1059, decided in 1893, that patentable invention consists in the embodiment of *new and useful means* to achieve a desired result and not in the *functions attributed to* the means." (Emphasis supplied) *General Radio Company* v. *Superior Electric Company*, 321 F.2d 857, 862 (3rd Cir. 1963) cert. denied 376 U.S. 938 (1964) reh. denied 376 U.S. 973 (1964).

We need not consider the effect of such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., in this case. As was brought out upon the direct examination of Willert by defense counsel, it is obvious that the so-called Egan Machine with the trade mark Reciproscrew is not the embodiment of the Willert patent under which it has an exclusive license. What was said by the Court in *Photon, Inc.* v. *Harris-Intertype Corp.*, 235 F. Supp. 921, 927 (D. Mass. 1964), aff'd. per curiam 349 F. 2d 856 (1st Cir. 1965), cert. denied 382 U.S. 1011 (1966) sub nom. *Tansel* v. *Photon, Inc.*, is equally applicable here, and I quote: "It is significant to note that plaintiff * * * did not come into court and offer evidence of having previously marketed a machine based on the * * * [Willert patent] which has enjoyed any commercial success whatsoever and which * * * [plaintiff] claims defendant has pirated." (Insertions mine) The Egan machine does *not* have means for selectively opening and closing the forward end of the passage, has *no* limit switch, but does have *a time delay in conjunction with a limit switch which is supplied, upon conversion of the machine, by customers themselves.* The Willert patent *does not* teach a time delay. There is nothing in the Willert patent which provides for *stopping* the operation of the cycle. The Willert patent teaches that the reciprocating screw rotates *continuously*. In addition, the Egan machine utilizes an

electrical drive whereas the Willert machine utilizes an hydraulic drive. The testimony indicates that the Egan machine more closely resembles the in-line reciprocating screw plasticizers manufactured by the Ankerwerk Company of Germany. At page 1122 of the trial transcript, Willert was asked: "Would you please explain to the Court the differences or similarities, whatever may be, between the Ankerwerk machine and the Egan machine?" Willert answered, at page 1124: "Well the operation of the Ankerwerk and the Egan machine, as our customers use them, is for all practical purposes identical." Despite this, Egan sought protection for the machine, which it manufactured, by selling it under the Willert patent.

Finding that the patent in suit is invalid, I do not reach the issue of infringement since an invalid patent cannot be infringed.

The foregoing constitutes the Court's findings of fact and conclusions of law, in compliance with F. R. Civ. P. 52(a). Present an appropriate order.

REYNIER J. WORTENDYKE, JR.,
Judge, United States District Court.

APPENDIX B

UNITED STATES COURT OF APPEALS

FOR THE THIRD CIRCUIT

No. 16446

FRANK W. EGAN & COMPANY AND
WILLIAM H. WILLERT,

Appellants

v.

MODERN PLASTIC MACHINERY CORP.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW JERSEY

Argued June 9, 1967
Before STALEY, *Chief Judge*, KALODNER, *Circuit Judge* and SHERIDAN, *District Judge*

Opinion of the Court.

(Filed December 29, 1967)

By KALODNER, *Circuit Judge*

Did the District Court correctly apply the controlling legal test of "obviousness" of Section 103 of the Patent Act of 1952, 35 U.S.C.A.,[1] in holding,[2] in the instant patent

[1] Section 103 provides as follows:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made. July 19, 1952, c. 950, § 1, 66 Stat. 798."

[2] The District Court's opinion is reported at 260 F. Supp. 22 (D.N.J. 1966).

infringement action, that Claims 1 and 4 of Patent No. 2,734,226 were invalid for lack of invention and obviousness in the light of the prior art?

The mooted patent for an "Injection Molding Apparatus" was issued to the plaintiff William H. Willert on February 14, 1956. The patent relates to a plastics injection molding machine for plasticizing and delivering to a mold plastics materials at high speed and under high pressure, and under critically controlled conditions. The plaintiff, Frank W. Egan & Company, is the exclusive licensee of the patent. The Defendant, Modern Plastic Machinery Corp. is charged with infringement of the patent by selling and installing in the United States infringing plastics injection molding units and machines built in Germany.

The District Court did not decide the issue of infringement. It did, however, enjoin the plaintiffs from threatening infringement or instituting actions for infringement against the defendant or its privies.

It is undisputed that Willert's patent is a "combination" patent; viz., a combination of old structural elements. Plaintiffs urge, however, that Willert's new combination of old structural elements, subsequently discussed, "has all the traditional hallmarks of patentable invention". The defendant, in reply, contends that the District Court did not err in its holding of "obviousness"; further, that Willert's patent did not contribute to the molding art.

What has been said brings us to resolution of the question as to whether the differences between Claims 1 and 4 of the Willert patent and the pertinent prior art would have been obvious to a person having ordinary skill in the art. 35 U.S.C.A. § 103; Graham v. John Deere Co., 383 U.S. 1 (1966); United States v. Adams, 383 U.S. 39 (1966). The latter cases are a guiding beacon and we sought to follow its course in Schmidinger v. Welsh, 383

F.2d 455 (1967) and Jones Knitting Corporation v. Morgan, 361 F.2d 451 (1966).

Applying the teachings of the *Graham* and *Adams* cases, we have reached the conclusion that the claimed invention was not "obvious" within the statutory meaning, and we must accordingly reverse the judgment of the District Court. Regrettably, the District Court did not follow the preferred procedure of deciding the issue of infringement; consequently, the cause must be remanded for further proceedings.

A plastics injection molding machine consists of two basic units: the injection unit, to which the Willert invention relates, and the mold. The injection unit includes, generally, a feed hopper, a plasticizing chamber, an injection chamber (which may be, and often is, the plasticizing chamber, as well) and various controls and power equipment. Plastics resin, or resins, in pellet or powder form, are introduced through the feed hopper into the plasticizing chamber of the injection unit. The pellets or powder are melted and homogenized in the plasticizing chamber. Subsequently, a quantity of the melted and homogenized resin is forcibly injected into the mold.

The mold is designed to produce a part, or a number of parts, of desired shape and size, e.g., cups, plates, bottle caps, etc. After injection, the mold is held in closed position to allow the injected resin to cool. The mold is next opened, the molded article removed and the mold closed. The injection cycle and the mold cycle are then repeated.

The industrial problem centers about the production at a high rate of output of a thermally stable melted resin having a uniform temperature and viscosity. The conventional means employed was to heat the outside of the plasticizing chamber, a method which did not satisfactorily cope with the fact that plastics resins are notably poor

heat conductors. Overheating causes decomposition of the resin. Application of heat to the exterior walls of the plasticizing chamber frequently resulted in overheating or burning the resin nearer the wall by the time the center of the resin was sufficiently heated. Frequently, there was an uneven distribution of heat, and the mixture was not homogeneous. The problems of achieving uniform temperature and viscosity were increased by the development of improved resins and of new resins having properties which made them attractive for various end uses, but which were difficult to plasticize and to mold.

The key to successful molding is proper plasticization. It was believed that this could not be obtained without improvement in the design of the injection cylinder. Actually, the problem was related to heat application and its control as applied to the injection cylinder. It does not appear that, prior to Willert, designs of the injection cylinder were more than partially successful.

The inventor recites in detail recognition of the technical difficulties centering around the problem of designing a machine to deliver a consistent mass of thoroughly homogenized plastic material at a uniform rate and temperature under pressure to a mold.

Claims 1 and 4 of the Willert patent, except for the preamble to Claim 4, are identical.[3] They define Willert's

[3] Claim 1, as set forth in the patent issued, reads as follows:

"1. A plastic material plasticizing and delivering mechanism comprising a barrel having a passage extending longitudinally therein, a rotatable and reciprocable screw for feeding plastic material toward the forward end of the screw, means for feeding plastic material between the screw and the wall of the passage at a point spaced from the forward end of the screw, means selectively opening and closing the forward end of the passage, means for rotating the screw, means for selectively forcibly but yielding opposing reciprocation of the screw in a rearward direction, and means responsive to a predetermined length of travel of the screw in a rearward direction for positively thrusting the screw in the passage in a forward direction to feed the plasticized material out the forward end of the barrel."

improved combination, and set forth the essential elements of the invention. Divided into its various components, and omitting reference numerals from the patent drawings, the invention, is set forth by the plaintiffs as follows:

"A plastic material plasticizing and delivering mechanism comprising

(a) "a barrel having a passage extending longitudinally therein,

(b) "a rotable and reciprocal screw for feeding plastic material toward the forward end of the screw,

(c) "means for feeding plastic material between the screw and the wall of the passage at a point spaced from the forward end of the screw,

(d) "means selectively opening and closing the forward end of the passage,

(e) "means for rotating the screw,

(f) "means for selectively forcibly but yieldingly opposing reciprocation of the screw in the passage in a rearward direction,

(g) "and means responsive to a predetermined length of travel of the screw in a rearward direction for positively thrusting the screw in the passage in a forward direction to feed the plasticized material out the forward end of the barrel."

The inventor claims that his apparatus produces a homogeneous mass of plastic compound free of volatile matter air, or other condensable substances, in an optimum plasticized state to be injected into either a mold or transfer cylinder. He sets forth that the resulting

molded article is characterized by its uniformity, freedom from strain, and the faithfulness which it follows even the finest and most intricate details of the mold cavity. He says that his invention provides a mechanism in which the plastic material is thoroughly mixed and plasticized, as well as brought to a uniform desired temperature before injection into the mold, whereby lower injection and mold clamping pressures are possible than heretofore, and also whereby the plastic material is subject to shorter total heating cycle than was otherwise possible.

In operation, the pellet or powder resin is fed through a hopper into the plasticizing and delivering barrel in which an in-line screw is positioned for rotating and reciprocating movement. Not only does the screw reciprocate forwardly and rearwardly, within the barrel, but the entire injection unit may be moved toward or away from the mold supporting structure. By the time the thermoplastic material reaches the end of the screw, it is thoroughly plasticized, by reason of its continually being worked between the screw and the bore of the barrel and its subjection to heat within the barrel. Since the material cannot pass out of the forward end (nozzle) during this process, it is deposited in the barrel ahead of the screw, thus causing a rearward thrust upon the screw and forcing it to retreat, thereby increasing the accommodation for the material forwarded by the feed screw, as it rotates. The amount of such accumulation of plasticized material relates to the capacity of the mold into which it is to be injected. The force at which the screw will retreat is selectively controlled by a hydraulic cylinder to which the screw is connected through the medium of a carriage. A pressure relief valve is set so that the feed screw retreats under a given thrust load. A limit switch is provided on the bed of the injection unit, so that when the latter has traveled a predetermined distance rearward the retreat will be stopped. As a result,

the volume of plastic material received in the barrel forward of the screw may be adjusted so as to substantially equal the volume of the mold employed. This, in effect, controls the "shot size". As a result of the closing and opening of the various solenoid operated valves, the screw is then hydraulically thrust forward to bring about the injection of the plastic compound through the now-opened nozzle at the forward end of the barrel and into the mold employed.

The adjustable "back pressure" is element (f) and the shot size control feature is element (g) above. These are the essence of Willert's claimed invention.

It is the concept of the inventor that the controlled back pressure creates optimum mixing and plasticizing for a given material. As we understand it, it is his claim that controlled back pressure is essential. Because they vary in such properties as viscosity and heat sensitivity, different plastics materials require different amounts of mechanical working to reach a proper state of plasticization. The amount of working depends primarily upon the magnitude of internal forces generated in the material as it moves along the rotating screw. This sheer stress is increased or decreased by varying the amount of back pressure. Back pressure creates internal heat in the mixture, thereby increasing uniformity of heat dispersal and enabling a lower degree of external heat. The degree of mixing required to create a properly homogenized "charge" depends upon, and is controlled by, the amount of back pressure. In addition, the use of an appropriately selected back pressure results in properly degassing the plastics material as it is moved forwardly in the barrel through the travels of the rotating screw. The shot control, of course, eliminates the problems attendant upon inadequacy of the "charge" to complete the mold, or overabundance of the "charge", which may result in lack of homogeneity of the next "charge".

The evidence, in our opinion, amply supports the commercial success of the apparatus in the industry, and the long-felt, unsatisfied need previously existing.

THE PRIOR ART AND VALIDITY.

The District Court concluded that the claimed invention, in the light of the prior art, would have been obvious to a person skilled in the art. Relied upon are eight references in the plastics injection molding machine field: Italian Patent 420,839; Goessling patent 2,359,839; German patent application 176,425; Cousino patents 2,402,805 and 2,471,813; Dinzl patent 2,493,805; Willcox patent 2,629,132, and a 1951 article by Beck. All of these were recited by the patent 2,492,720 for a hydraulic drive and speed control, the District Court relied upon the Wiedmann patent 2,397,395, relating to a hydraulic transmission system; the Tyler patent 2,492,720 for a hydraulic drive and speed control, and the German Vorraber patent 180,007 which disclosed an apparatus for the manufacture of artificial stones and brick.

We do not stop to detail the content of these citations, for they are fully set out in the reported decision of the District Court. We have no doubt that elements of the claimed invention (a) through (e), as set out above, were disclosed prior to Willert. The file wrapper clearly shows the issue before the Patent Office was reduced to elements (f) and (g), and whether these elements were either a part of the prior art or at least obvious to a person skilled in the prior art. Indeed, the file wrapper specifically shows the citation of the Dinzl patent as disclosing a limit switch to control the length of travel of the plunger.

In view of the file wrapper history, we think the Patent Office conclusion is entitled to weight, and its determination in issuing the patent enables the plaintiffs to start with the presumption of validity. However, the file wrapper would indicate a narrow construction of the patent.

Appendix B

As stated in Ling-Temco-Vought, Inc. v. Kollsman Instrument Corp., 372 F.2d 263 (2 Cir. 1967):

> "Whether or not it [the patent] is to be classified as a combination patent or an improvement patent or both is in this case largely a matter of semantics. As Judge Learned Hand phrased it in B. G. Corp. v. Walter Kidde & Co., 79 F.2d 20 (2 Cir. 1935): 'All machines are made up of the same elements * * * But the elements are capable of an infinity of permutations, and the selection of that group which proves serviceable to a given need may require a high degree of orginality. It is that act of selection which is the invention.'" 372 F.2d at 268.

The plaintiffs here do not deny that the elements of the apparatus involved are old. Their concession includes the hydraulic system, as to which, in a different context, Weidmann shows a form of "back pressure". But the use in a remote cited art certainly suggests it to be less likely that a person of ordinary skill in the pertinent art would have arrived at the result achieved by the patent in suit. Ling-Temco-Vought, Inc. v. Kollsman Instrument Corp., *supra;* Formal Fashions, Inc. v. Braiman Bows, Inc., 369 F.2d 536 (2 Cir. 1966); Ric-Wil Co. v. E. B. Kaiser Co., 179 F.2d 401 (7 Cir. 1950). In any event, the mere fact that the elements are concededly old does not itself militate against patentability, as the District Court seems to suggest.

Here, in our view, Willert employs a method of achieving the result needed by the industry conceptually different from that disclosed by the prior art, and indeed, uses the hydraulic "back pressure" in a manner neither indicated by the prior art nor obvious to a person skilled in the art, at least on the record of this case. We do not think that the reference to "back pressure" in the Cousino patent 2,402,805, may be read as bearing on the invention in suit. And while back pressure may have resulted with respect to the

retreat of the hydraulic fluid in the Italian patent, adjustable back pressure was not mentioned, and the resultant back pressure was inconsequential and not conceptually related to the invention. It remained for Willert to recognize that adjustable back pressure, of sufficient magnitude, created through the use of hydraulic force opposing the retreat of the screw, resulted in eliminating substantial problems of the industry. It is the back pressure which causes more internal heat to be generated, obtaining greater uniformity of heat and its distribution, so essential to the proper plasticization and homogenization of the plastics material; speeds up the process, and reduces the likelihood of air bubbles and similar disruptive occurrences. Notwithstanding the protestations of the defendant, the record adequately demonstrates that its own experts hailed the precise point of Willert's invention, the importance of the concept and its significance.[4]

In summary, we conclude that the Willert invention is novel, has utility and not obvious to one having ordinary skill in the art to which its subject matter pertains, and that it represents a significant advance in the field. In doing so we have given measured weight to the "secondary considerations" of "commercial success, long felt but unsolved needs, [and] failure of others" to achieve the result acknowledged as relevant indicia, in Graham v. Deere, *supra*, and in United States v. Adams, *supra*. See Jones Knitting Corporation v. Morgan, *supra*, at page 458.

For the reasons stated, the Judgment of the District Court will be reversed, and the cause remanded with directions to proceed in accordance with this Opinion.

---

[4] The defendant's executive vice-president, Leslie J. Kovach, in a paper which he presented to the American Society of Mechanical Engineers, evaulated the "in-line reciprocating screw" of the *Willert* patent as a "great advance in the processing and economy of plastic materials", and the adjustable back pressure functioning of the reciprocating screw as "the real break-through in this new plasticizing concept". The paper, incidentally, was presented in late 1964, after the instant suit was commenced.

APPENDIX C

UNITED STATES COURT OF APPEALS

FOR THE THIRD CIRCUIT

No. 16,446

FRANK W. EGAN & COMPANY and
WILLIAM H. WILLERT,

Appellants,

vs.

MODERN PLASTIC MACHINERY CORP.

(D. C. Civil Action No. 274-64)

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

Present: STALEY, *Chief Judge*, KALODNER, *Circuit Judge*, and SHERIDAN, *District Judge*.

JUDGMENT

This cause came on to be heard on the record from the United States District Court for the District of New Jersey, and was argued by counsel.

On consideration whereof it is now here ordered and adjudged by this Court that the judgment of the said District Court, filed December 12, 1966, be, and the same is hereby reversed, with costs, and the cause remanded with directions to proceed in accordance with the opinion of this Court.

December 29, 1967

ATTEST:

THOMAS F. QUINN,
Clerk.

Received & Filed
Dec 29 1967
Thomas F. Quinn, Clerk

APPENDIX D

UNITED STATES COURT OF APPEALS

FOR THE THIRD CIRCUIT

No. 16,446

FRANK W. EGAN & COMPANY and
WILLIAM H. WILLERT,

Appellants,

vs.

MODERN PLASTIC MACHINERY CORP.

Sur Petition for Rehearing

Present: HASTIE, Chief Judge, MCLAUGHLIN, KALODNER, STALEY, SMITH, FREEDMAN, SEITZ, VAN DUSEN, Circuit Judges and SHERIDAN, District Judge.

The petition for rehearing filed by Appellee in the above entitled case having been submitted to the judges who participated in the decision of this court and to all the other available circuit judges of the circuit in regular active service, and no judge who concurred in the decision having asked for rehearing, and a majority of the circuit judges of the circuit in regular active service not having voted for rehearing by the court in banc, the petition for rehearing is denied.

By the Court,

KALODNER,
Circuit Judge.

Dated: February 1, 1968.

Received & Filed
Feb 1 1968
Thomas F. Quinn, Clerk

APPENDIX E

Excerpt From the Court of Appeals' Opinion

"* * * the record adequately demonstrates that its own experts hailed the precise point of Willert's invention, the importance of the concept and its significance.'"

* * *

"'The defendant's executive vice-president, Leslie J. Kovach, in a paper which he presented to the American Society of Mechanical Engineers, evaluated the 'in-line reciprocating screw' *of the Willert patent* as a 'great advance in the processing and economy of plastic materials,' and the adjustable back pressure functioning of the reciprocating screw as 'the real breakthrough in this new plasticizing concept.' The paper incidentally was presented in late 1964, after the instant suit was commenced." (italics added.)

Excerpt From the Article "Screw-Injection Process and Equipment"

by LESLIE J. KOVACH

"Injection molding with the in-line reciprocating screw proved to be a great advance in the processing and economy of plastic materials."

* * *

"The actual charging of the front chamber under controlled back pressure is the real breakthrough in this new plasticizing concept."

APPENDIX F

Title 35 of the United States Code provides in pertinent part:

SECTION 101. Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

SECTION 102. A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States • • •

SECTION 103. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

• • •

SECTION 112.

• • •

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to

cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

• • •

SECTION 282.

• • •

The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

(2) Invalidity of the patent or any claim in suit on any ground specified in part II of this title as a condition for patentability,

(3) Invalidity of the patent or any claim in suit for failure to comply with any requirement of sections 112 or 251 of this title.

• • •

Rule 52 of the Federal Rules of Civil Procedure provides in pertinent part:

• • •

Findings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses.

• • •

SUPREME COURT, U. S.

Office-Supreme Court, U.S.
FILED
MAY 6 1968
JOHN F. DAVIS, CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, 1967

No. 1408

MODERN PLASTIC MACHINERY CORP.,

Petitioner,

vs.

FRANK W. EAGAN & COMPANY and
WILLIAM H. WILLERT,

Respondents.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE THIRD CIRCUIT

ERNEST G. MONTAGUE,
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IN THE

Supreme Court of the United States

OCTOBER TERM, 1967

No. .....

MODERN PLASTIC MACHINERY CORP.,
Petitioner,

vs.

FRANK W. EGAN & COMPANY, and
WILLIAM H. WILLEBT,
Respondents.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE THIRD CIRCUIT

To the Honorable
the Chief Justice and Associate Justices
of the Supreme Court of the United States:

Your Petitioner, Modern Plastic Machinery Corp., prays that a writ of certiorari should issue to review the order of the Court of Appeals for the Third Circuit entered on April 26, 1968, denying a motion for vacating or modifying the judgment and ordering a rehearing in the District Court for a new trial on the validity of claims 1 and 4 of the patent in suit.

Opinions of the Courts Below

(a) Opinion of the District Court reported at 260 F. Supp. 22 (Appendix A of the Petition for Writ of Certiorari to the United States Court of Appeals for the Third

Circuit, Docket No. 1384—hereinafter referred to as "Pet. Cert. 1384").

(b) Opinion of the United States Court of Appeals for the Third Circuit in Frank W. Egan & Company and William H. Willert, v. Modern Plastic Machinery Corp., No. 16,446 dated December 29, 1967, reported in 387 F. 2d 319 (1967). Copies of the Opinion, the Judgment and the order denying the Petition for Rehearing are appended to Pet. Cert. 1384, Appendices B, C and D thereof.

(c) The order denying the motion for vacating or modifying the judgment and ordering a rehearing in the District Court for a new trial is appended to this petition (Appendix A).

Jurisdiction

1. This is a suit arising under the Patent Laws of the United States, Title 35; 35 U.S.C. § 281; 28 U.S.C. §§ 1338 (a) and 1400 (b).

2. The jurisdiction of this Court is invoked under Title 28, Section 1254 of the United States Code.

3. The date of the order which petitioners seek to have reviewed is April 26, 1968.

Question Presented

The principal and sole question presented is the validity of claims 1 and 4 of the Willert patent No. 2,734,226. The Court of Appeals for the Third Circuit found validity of claims 1 and 4, remanding the case to the District Court for determination of the infringement issue. A motion for a new trial, vacating or modifying the judgment in the

above identified case or ordering a rehearing in the District Court on the validity of claims 1 and 4 of the patent in suit based upon newly presented evidence was denied by the Court of Appeals without opinion.

Statutory Provisions and Procedure Rule Involved

This case involves Sections 101, 102 and 103 and 282 of Title 35 of the United States Code, and Federal Rule of Civil Procedure Number 52, all of which are set forth in Appendix F of Pet. Cert. 1384.

Statement of the Case

The statement of this case prior to the motion for a new trial is set forth in the Pet. Cert. 1384, pages 3 *et seq.*

Subsequently a motion for vacating or modifying the judgment or ordering a rehearing in the District Court on the validity of Claims 1 and 4 of the Patent in Suit was denied, which motion was properly supported and based on the newly submitted U. S. Patent No. 1,533,191, to W. Kaiser et al. (Appendix B herein) on applicable law clearly set forth in a Memorandum of Law attached to said motion.

It will be shown, that said Kaiser et al. patent completely *anticipates on its face* the sole inventive "concept" of the Willert patent in issue, as defined in its opinion by the Court of Appeals for the Third Circuit.

Willert claims that he was the first to teaching plasticizing of plastic material by means of adjustable back pressure exerted upon a reciprocating rotating screw.

W. KAISER ET AL. TEACH BEYOND ANY DOUBT THE PLASTICIZING OF PLASTIC MATERIAL BY MEANS OF ADJUSTABLE BACK PRESSURE EXERTED UPON A RECIPROCATING ROTATING SCREW.

Respondents did not reply to said motion on its merits and confined themselves to a characterization of said motion as another petition for rehearing in a letter to the Court of Appeals (Appendix C herein), in spite of the presentation of a new patent which voids any claim for a new concept of invention allegedly contributed by Willert.

The Court of Appeals denied the motion without granting a hearing and without rendering an opinion.

If it is taken into consideration that a patent is a type of monopoly enjoyed by the patentee, public interest dictates that any patent requires careful examination concerning the requirements for patentability.

Reasons for Granting the Writ

In addition to the reasons set forth in Pet. Cert. No. 1384 pages 4-6, this petition presents a question of law in cases of newly presented evidence, particularly if the patentee and inventor himself was not in a position to define his inventive contribution, when called upon to state his invention to the District Court, and also if newly presented evidence in a patent case, burdened with the heavy public interest, was required to be presented because *respondents shifted their position* before the Court of Appeals, and alleged a new "concept" of invention for a feature which was recognized and conceded by respondents as a teaching of the prior art in the proceeding in the District Court as correctly reflected in the opinion of the District Court.

In *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U. S. 238 (1944), this Court permitted the introduction of "newly presented evidence" to reverse, years later, a prior Court of Appeals judgment of patent validity, on the basis that the prior judgment was based upon a new shift in position by the plaintiff patent owner for the first.

time before the Court of Appeals, and upon which new shift in position the Court of Appeals held the patent valid.

It was this shift in position by the plaintiff *for the first time* before the Court of Appeals in *Hazel-Atlas*, which, as this Hon. Court held, permitted the defendant there to bring in at that late date the "newly presented evidence" to meet this shifted position, which "newly presented evidence" was not required in the District Court in the light of plaintiff's original position.

The last doubt whether this writ should be granted, is removed, if it is considered that in *Hazel-Atlas* this Court further stated:

> "This matter does not concern only private parties. *There are issues of great moment to the public in a patent suit*" [citing cases]." (at p. 246) (Italics added)

The consideration to be given by the Court of Appeals on these motions is merely one of *prima facie* consideration, the full finding reserved for the District Court to fully evaluate the new evidence. *Borg-Warner Corp.* v. *Mall Tool Co.*, 220 F. 2d 803 (7th Cir. 1955), cert. denied, 349 U. S. 946; *cf. Hazel-Atlas, supra.*

Finally, the Court of Appeals issued a mandate to the District Court to adjudicate the issue of infringement. How can the District Court discharge this duty, if the *entire* prior art is to be considered in order to determine the scope of the claims?

Argument

It has been stated in the Pet. Cert. No. 1384 that it was one of the *Findings of Fact* by Judge Wortendyke, in the District Court, according to which plaintiffs (respondents herein) themselves in a footnote in their brief (p. 49b) state:

> "The structure for applying an adjustable back pressure to a reciprocating screw was then [1950 and 1951] available (e.g. Wiedmann (D-8), Fig. 1, valve 10 and associated hydraulic circuitry) *to any plastics injection molding machine designer* who wanted to incorporate that feature in his machines." (Italics added.)

On the other hand, respondents appreciated, that this *concession* amounted to the end of their rope, since all other elements of the Willert patent were also conceded as old, and respondents had to resort to a *new or novel concept*, which was advanced only in their Reply Brief before the Court of Appeals and yet, not even in their Brief on Appeal. This new *concept* required a *withdrawal of their previous concession*, namely that Wiedmann amounts to anticipation of the Willert invention, and advancing now a new theory, according to which *Wiedmann* is *not* an anticipation of the Willert invention, but rather that the novel *concept* resides in the use of adjustable back pressure, as known *per se* by Wiedmann, to plastic material for the purpose of plasticizing the same.

It should be emphasized that respondents put a cloud over the alleged invention of Willert and did not come forward before the District Court as to what actually Willert's invention allegedly amounted to.

It is, however, strange and cannot be explained that the Court of Appeals accepted the alleged *novel concept*, completely neglecting and ignoring *respondents' admission of anticipation* before the District Court, which concession undoubtedly contributed to the conclusions of law set forth by the District Court.

It is for this reason, that the Kaiser et al. patent No. 1,533,191 (App. B) had to be presented at this late date, in order to provide evidence that this last retreat by respondents, namely that Willert's invention stands for

applying of adjustable back pressure to a reciprocable rotating screw for plasticizing of plastic material, is likewise part of the prior art and *not an invention of Willert.* Even this last retreat by respondents is clearly met *on its face* by the newly presented Kaiser et al. patent.

Conclusion

It has been emphasized in the Pet. Cert. No. 1384 that this litigation is of interest to the entire plastic industry in view of the present licensees and other parties under threat of litigation, unless they are prepared to accept a license of the Willert patent.

The Court of Appeals erred in the first place, in reversing the judgment arrived at by the District Court, in finding the claims 1 and 4 of the Willert patent valid and the Court of Appeals erred again in denying the motion and, in the light of the Kaiser et al. patent, should have remanded the case to the District Court for a further consideration of the Kaiser et al. patent, particularly since respondents caused the late presentation of the Kaiser et al. patent by their shift of position before the Court of Appeals.

Reversing the Court of Appeals, petitioner's motion should be granted.

Respectfully submitted,

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APPENDIX A

UNITED STATES COURT OF APPEALS

FOR THE THIRD CIRCUIT

No. 16,446

FRANK W. EGAN & COMPANY and
WILLIAM H. WILLERT,
Appellants,

vs.

MODERN PLASTIC MACHINERY CORP.

Present: KALODNER and STALEY, *Circuit Judges*, and SHERIDAN, *District Judge*

Upon consideration of appellee's motion for vacating or modifying the judgment or ordering a rehearing in the District Court for the District of New Jersey on the validity of Claims 1 and 4 of the patent in suit, and the letter by counsel for appellant in answer thereto, both in the above-entitled case,

It is ORDERED that appellee's motion be and hereby is denied.

By the Court,

KALODNER
Circuit Judge

Dated: April 26, 1968

APPENDIX B

(See opposite ☞)

April 14, 1925. 1,533,191

W. KAISER ET AL.

PRESS FOR PLASTIC MATERIALS

Original Filed April 27, 1923

UNITED STATES PATENT OFFICE.

Fig. 1

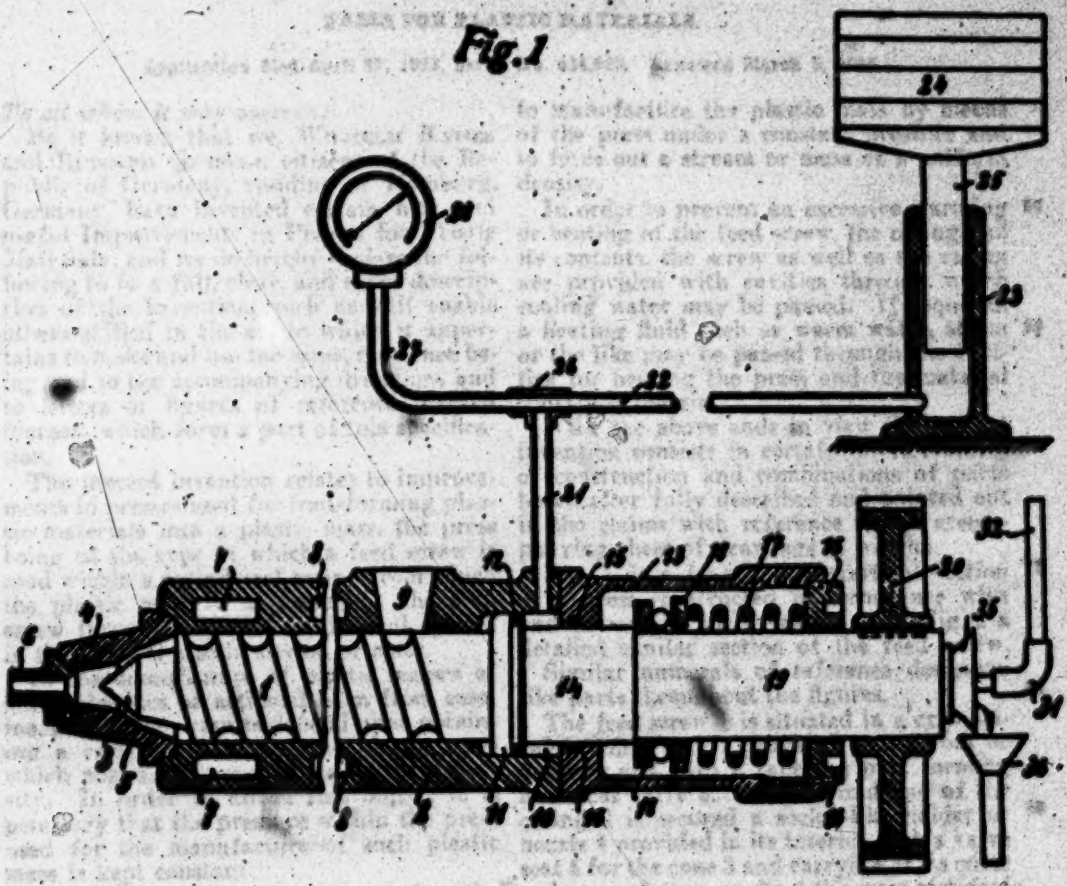
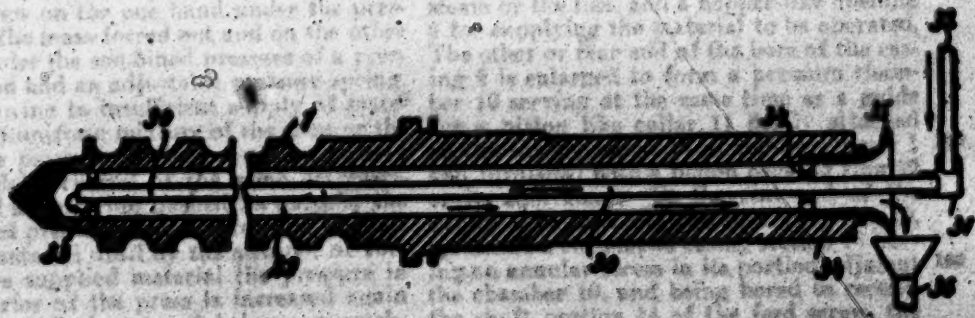


Fig. 2



INVENTORS

William Kaiser

Wilhelm Kaiser

By Richards & Geier

Attorneys

Patented Apr. 14, 1925. 1,533,191

UNITED STATES PATENT OFFICE.

WILHELM KAISER AND RUDOLPH GARDELA, OF HAMBURG, GERMANY, ASSIGNORS TO ADOLF BÄHR, OF HAMBURG, GERMANY.

PRESS FOR PLASTIC MATERIALS.

Application filed April 27, 1922, Serial No. 556,946. Renewed March 7, 1924.

To all whom it may concern:

Be it known that we, WILHELM KAISER and RUDOLPH GARDELA, citizens of the Republic of Germany, residing at Hamburg, Germany, have invented certain new and useful Improvements in Presses for Plastic Materials; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The present invention relates to improvements in presses used for transforming plastic materials into a plastic mass, the press being of the type in which a feed screw is used within a cylindrical casing from which the plastic material is forced by the feed screw through a mould or die and ejected in the form of a solid stream or mass.

In the manufacture of plastic masses of horn-substance or artificial horn from casein, satisfactory results depend upon obtaining a complete homogeneous plastic mass which possesses throughout a uniform density. In order to attain this object, it is necessary that the pressure within the press used for the manufacture of such plastic mass is kept constant.

According to the present invention the maintenance of constant pressure is obtained by constructing the front end of the feed screw in conjunction with the outlet end of the cylinder or casing body to act or operate as a valve mechanism, and by setting the feed screw on the one hand under the pressure of the mass forced out and on the other hand under the combined pressure of a pressure-fluid and an adjustable pressure-spring. When owing to insufficient supply of material, non-uniform mixture of the same or the like, the pressure in the press, particularly at the delivery end of the same decreases, the feed screw being pushed forward by the combined pressure-means, throttling the exit of the material until by the advance of furthermore supplied material the pressure in the interior of the press is increased again and the desired state of balance re-established. When the pressure has become too high the adjustment takes place in a reversed manner. Thus it is rendered possible to manufacture the plastic mass by means of the press under a constant pressure and to force out a stream or mass of a uniform density.

In order to prevent an excessive warming or heating of the feed screw, the casing and its contents, the screw as well as the casing are provided with cavities through which cooling water may be passed. If required, a heating fluid such as warm water, steam or the like may be passed through the cavities for heating the press and the material contained therein.

With the above ends in view the present invention consists in certain novel features of construction and combinations of parts hereinafter fully described and pointed out in the claims with reference to the accompanying sheet of drawings in which:

Fig. 1 is a longitudinal vertical section of a press constructed in accordance with and embodying the invention; and Fig. 2 a detailed similar section of the feed screw.

Similar numerals of reference designate like parts throughout the figures.

The feed screw 1 is situated in a cylindrical casing 2 and is provided at its front or delivery end with a tapering part forming a conical valve 3. To the front end of the casing 2 is secured a socket-like holder or nozzle 4 provided in its interior with a valve seat 5 for the cone 3 and carrying at its outer end a mouthpiece or die 6 the cross sectional area of which corresponds to that of the body of plastic mass to be produced. The casing 2 has in its wall preferably two cavities 7 and 8 for the reception or passage of a cooling or heating medium such as water, steam or the like, and a hopper-like opening 9 for supplying the material to be operated. The other or rear end of the bore of the casing 2 is enlarged to form a pressure chamber 10 serving at the same time as a guide for a piston like collar 11 firmly attached on the shaft portion 14 of the feed screw 1 and furnished with a piston packing ring 12 or its equivalent. To the rear end of the casing 2 beyond the pressure chamber 10, is secured a cupshaped casing section 13 having an annular recess in its portion adjacent the chamber 10, and being bored to receive the shaft portion 14 of the feed screw, the recess being provided with a packing ring 15. In the other, outer end of the casing section 13 is screwed an annular nut 16 through

Patented Apr. 14, 1925. 1,533,191

UNITED STATES PATENT OFFICE.

WILHELM MAINER AND RUDOLPH DANDELS, OF HAMBURG, GERMANY, ASSIGNORS TO ADOLF BARR, OF HAMBURG, GERMANY.

PRESS FOR PLASTIC MATERIALS.

Application filed [illegible] 27, 1923. Serial No. 675,968. Renewed March 7, 1925.

to manufacture the plastic mass by means of the press under a constant pressure and to force out a stream or mass of a uniform density.

In order to prevent an escape of the plastic material between the feed screw, the casing and the outlet-nozzle, as well as the casing are provided with cavities through which cooling water may be passed. If required, a heating fluid such as warm water, steam or the like may be passed through the cavities for heating the press and the material contained therein.

With the above ends in view the present invention consists in certain novel features of construction and combinations of parts hereinafter fully described and pointed out in the claims with reference to the accompanying sheet of drawings in which:

Fig. 1 is a longitudinal vertical section of a press constructed in accordance with the present invention; and Fig. 2 a similar sectional section of the feed screw. Similar numerals of reference designate the same parts throughout the figures.

The feed screw 1 is situated in a cylindrical casing 2 and is provided at its front end with a tapering end forming a conical valve 3. To the front end of the casing 2 is secured a nozzle-like holder or nozzle 4 provided in its interior with a valve seat 5 for the cone 3 and carrying at its outer end a mouthpiece or die 6 the cross sectional area of which corresponds in that of the body or plastic mass to be produced. The casing 2 has in its wall preferably two annular chambers 7 and 8 for the reception or passage of a cooling or heating medium such as water, steam or the like, and a hopper-like opening 9 for supplying the material to be operated. The other or rear end of the bore of the casing 2 is enlarged to form a pressure chamber 10 serving at the same time as a guide for a piston like collar 11 firmly attached on the shaft portion 14 of the feed screw 1 and furnished with a piston packing ring 12 or its equivalent. To the rear end of the casing 2 beyond the pressure chamber 10 is secured a cupshaped casing section 13 having an annular recess in its portion adjacent the chamber 10, and being bored to receive the shaft portion 14 of the feed screw, the recess being provided with a packing ring 15. In the other, outer end of the casing section 13 is screwed an annular nut 16 through

[illegible]

which the reduced portion 19 of the feed screw passes. Between the nut 16 and a thrust bearing 18, resting against the offset or shoulder between the sections 14 and 19 of the feed screw shaft, is placed a cylindrical spiral spring 17 the pressure of which may be adjusted by screwing in or out the nut 16 as required. Motion may be imparted to the feed screw by means of a gear wheel 20 (belt pulley or the like) keyed on the free extremity of the feed screw shaft section 19.

The pressure chamber 10 is in communication with the cylinder 23 of a fluid pressure accumulator by means of pipes 21 and 22 the piston 25 of the accumulator being actuated by a weight or weights 24 to force it downwardly into the cylinder 23 containing the fluid. The pressure existing in the accumulator and pressure chamber is indicated at any time by a gauge 28 connected to the pipes 21 and 22 by means of a pipe 27 and a T fitting 26.

The feed screw 1 and its shaft portions 14, 19 have a central cavity or recess 29 in which is mounted a tube 30 by means of an annular disc 33 and a bush 34 provided in axial direction with holes or passages. The pipe 30 is in communication with a supply pipe 32 by means of an elbow 31 so that any cooling or heating fluid, supplied through the pipe 32, may pass through the tube 30, flow back through the annular space between this tube and the inner wall of the central cavity or bore 29 and discharge through a delivery funnel 35 of the bush 34 into a gutter-pipe 36 or the like.

The tube 30 may either be mounted stationary within the feed screw and revolve in the elbow 31, or it may be fixed in the elbow 31 and rotate in the disc 33 and bush 34.

The function of the improved press is as follows:

The plastic material supplied through the hopper 9 is conveyed along by the feed screw 1 whereby it is kneaded and pressed under the pressure for which the press has been adjusted. The thus treated material is then forced through the annular space between the conical valve body 3 and the valve seat 5 and is finally discharged through the mouthpiece or die 6 in the form of a solid stream. The pressure by which the material is compressed depends on the size of the annular outlet orifice between the cone 3 and the seat 5. By maintaining a certain size of this orifice the material discharged through the die 6 as a stream of plastic mass, has a certain density or compression dependent on the pressure by which the mass is forced out. This pressure is adjusted and controlled in part by means of the pressure accumulator and in part by the adjustable spiral spring. The accumulator, which may be used simultaneously for a plurality of presses supplies all these presses with a uniform pressure which corresponds to the smallest pressure needed. The steps or rates of pressure required for the separate presses are determined and effected by means of the spiral spring 17 which furnishes therefore an additional adjusting pressure.

When for any reason, the pressure of the material in the annular outlet passage between the cone 3 and its seat 5 decreases, the combined effects of the pressure fluid and the adjusting spring will exceed and displace the feed screw axially to the delivery end of the casing, whereby the size of the annular outlet space is reduced. This results in an increase of the pressure in the said annular outlet space whereby the feed screw is pushed back in the opposite direction until the state of balance in pressure is re-established. The feed screw is therefore continuously oscillating in axial direction and tending to maintain the desired pressure in the annular outlet space so that the plastic mass is discharged through the die under a uniform pressure and consequently with a constant compression or density.

By adjusting the cooling water in the cavities 7 and 8, as well as in the feed screw, the temperature in the interior of the press may be controlled as required. Of special importance is the fact that the state of heat of the feed screw can be fully controlled as the temperature can be ascertained at any time by the water running down from the bush-funnel 35.

We claim:

1. A press for extruding plastic material, comprising a casing, and a feed screw rotatable therein characterized by the fact that the front end of the screw in conjunction with the feed screw casing is constructed to form a valve mechanism, and that the feed screw forces the plastic mass out under the combined pressure of a pressure fluid and an adjustable pressure spring.

2. A press according to claim 1 characterized by a feed screw having an inner cavity supplied by inlet and outlet pipe conduits with a medium for cooling or heating the said feed screw.

3. A press according to claim 1 characterized by a feed screw provided with a central bore extending nearly to its front end and having mounted therein an annular disc and a bush serving as supports for a central tube inserted into bore, the said disc and bush having holes for the passage of a temperature modifying fluid supplied through the tube into the bore of the feed screw.

In testimony that we claim the foregoing as our invention, we have signed our names.

WILHELM KAISER.
RUDOLPH GARDELS.

APPENDIX C

(See opposite ☞)

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April 11, 1968

Thomas F. Quinn, Esq.
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2046 U. S. Courthouse
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Philadelphia, Pennsylvania 19107

Frank W. Egan & Company and William H. Willert, Plaintiffs (Appellants), v. Modern Plastic Machinery Corp., Defendant (Appellee) - Appeal No. 16,446

Dear Mr. Quinn:

I am counsel for plaintiffs-appellants in the above-captioned appeal, in which this Court's opinion was filed and its judgment entered, reversing the District Court, on December 29, 1967. A petition by defendant-appellee for rehearing was denied on February 1, 1968. By order entered March 22, 1968, issuance of the mandate has been stayed to May 1, 1968.

In the late afternoon of Tuesday, April 9, 1968 there was served on me by counsel for appellee a "Motion for Vacating or Modifying the Judgment in the Above-Entitled Case or Ordering a Rehearing in the District Court on the Validity of Claims 1 and 4 of the Patent in Suit." The notice accompanying the motion specified Monday, April 15, 1968 as the return date.

I have been informed by Mr. Robert Ryan of Messrs. Drinker Biddle & Reath that he conferred this

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morning with William J. Brennan of your office. Mr. Brennan advised Mr. Ryan that the panel of Judges sitting on next Monday, April 15, would not hear appellee's motion, and that there was no necessity for counsel for appellants to be present at that time.

I understand further that appellee's motion will be referred to the panel (Staley, Chief Judge, Kalodner, Circuit Judge, and Sheridan, District Judge) which heard and decided this appeal. The motion, which is distinctively hybrid, is in essence a second petition for rehearing, offering nothing new, and rehearsing once more many of the contentions previously made by appellee and rejected by the Court. In addition, the motion seeks to modify the judgment by having included in it a direction to the District Court to reopen.

Appellants firmly believe that appellee's motion is without substance. Because of its similarity to a petition for rehearing, appellants do not propose to file any papers in opposition, unless requested to do so by the Court.

If you believe it appropriate, I would appreciate your sending copies of this letter to the members of the Court to whom copies of appellee's motion papers are submitted.

I am delivering a copy of this letter by hand to appellee's New York counsel today, and mailing a copy to appellee's Newark counsel.

Respectfully yours,

William K. Kerr

WKK:RBM

William K. Kerr

cc - Ernest G. Montague, Esq.
Harry Sommers, Esq.

BY HAND

SUPREME COURT, U. S.

Office-Supreme Court, U.S.
FILED
MAY 16 1968
JOHN F. DAVIS, CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, 1967

Nos. 1384 & 1408

MODERN PLASTIC MACHINERY CORP.,
Petitioner,

vs.

FRANK W. EGAN & COMPANY and
WILLIAM H. WILLERT,
Respondents.

RESPONDENTS' BRIEF IN OPPOSITION TO PETITIONS FOR WRITS OF CERTIORARI

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May 14, 1968

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IN THE

Supreme Court of the United States

OCTOBER TERM, 1967

MODERN PLASTIC MACHINERY CORP.,
Petitioner,

vs.

FRANK W. EGAN & COMPANY and
WILLIAM H. WILLERT,
Respondents.

Nos. 1384 & 1408

RESPONDENTS' BRIEF IN OPPOSITION TO PETITIONS FOR WRITS OF CERTIORARI

Introduction

This ordinary patent suit has spawned two separate petitions for writs of certiorari. As we shall demonstrate in this brief, there is nothing about this case, and nothing raised in either petition, which warrants review by this Court.

The petition in No. 1384 is directed to the judgment of the United States Court of Appeals for the Third Circuit, which held valid respondents' plastic injection molding machine patent and remanded the action to the District Court to decide the issue of infringement. The petition in No. 1408 is directed to a subsequent order of the same Court of Appeals denying petitioner's "Motion for Vacating or Modifying The Judgment . . . Or Ordering a Rehearing in the District Court on the Validity of Claims 1 and 4 of the Patent In Suit."

The opinion of the Court of Appeals on the merits is consonant with this Court's recent opinions in patent cases and is manifestly right. The denial of petitioner's unorthodox motion is also proper and correct.

Neither petition is based on a conflict between the decisions of the Court of Appeals for the Third Circuit and the decision of another Court of Appeals on the same matter. Neither petition raises any unsettled question of Federal law. Except for petitioner's own conduct, there has been no departure from the accepted and usual course of judicial proceedings. No question of imperative public importance is involved.

In short, there is no special or important reason why either of the writs prayed for should be granted.

Opinions Below

The Opinion of the United States Court of Appeals for the Third Circuit (1384, App. B)* is reported at 387 F. 2d 319. The Opinion of the United States District Court for the District of New Jersey (1384, App. A) is reported at 260 F. Supp. 22.** The District Court filed no separate Findings of Fact. It ended its memorandum opinion with the statement (1384, App. A, p. 52):

> "The foregoing constitutes the Court's findings of fact and conclusions of law, in compliance with F. R. Civ. P. 52(a)."

---

*Appendix B to the petition in No. 1384. Line 9 of the second full paragraph of the Court of Appeals' opinion, appearing at App. B, p. 60, should read—Patent Office, except the German application. In addition,—.

**The Opinion of the District Court appears also in Appendix for Appellants before the Court of Appeals at 6a-39a.

Jurisdiction

The judgment sought to be reviewed in No. 1384 is dated, and was entered on, December 29, 1967. The order sought to be reviewed in No. 1408 is dated, and was filed on, April 26, 1968.

After the Court of Appeals' opinion on the merits, and before petitioner filed its motion to vacate, etc., a petition for rehearing was denied by the Court of Appeals on February 1, 1968.

The petitions seek to invoke jurisdiction of this Court under 28 U. S. C. § 1254(1).

Questions Presented

Each petition presents the same fundamental question for review (1384, Pet. p. 2; 1408, Pet. p. 2).* As framed by petitioner, however, that question improperly encompasses every legal facet of the vast subject of patent validity. At the same time, each petition is silent on a threshold procedural question.

The procedural question raised by the filing of each petition is whether or not review by this Court of the non-final judgment remanding this cause to the District Court to determine the issue of infringement, or review of the order denying petitioner's motion, is premature.

If the petition in No. 1384 seeking review of the judgment is not premature, the only substantive question properly presented by it is whether or not petitioner is entitled to another hearing on the issue of "obviousness" under 35 U. S. C. § 103. The Court of Appeals correctly held the subject matter of respondents' patent to have been unobvious to a person having ordinary skill in the pertinent art.

---

*No. 1384, Petition, page 2, and No. 1408, Petition, page 2.

A separate question raised by the second-filed petition is whether or not this Court should consider, or should order either court below to consider, evidence not made a part of the record in the trial court, and with respect to which no attempt was made to reopen or to satisfy the basic requirements that the evidence was newly discovered.

Statutes and Rules

35 U. S. C. §§ 101, 102 and 282, cited in the petitions at page 3, have no application here. They are not alluded to elsewhere in the petitions.

Rule 52(a), F. R. C. P., is not involved. The Court of Appeals did not hold any finding of fact by the District Court to have been "clearly erroneous."

On the substantive question raised in No. 1384, 35 U. S. C. § 103* is the statutory provision principally involved. 35 U. S. C. § 112* is also pertinent.

On the question raised in No. 1408, Rule 60(b), F. R. C. P.,** is involved.

Statement of the Case

1. The Proceedings Below

This is an action for infringement of respondents' Willert Patent No. 2,734,226, issued February 14, 1956, for "Injection Molding Apparatus". Jurisdiction of the court of first instance is based upon 35 U. S. C. § 281 and 28 U. S. C. § 1338(a).

---

*Reprinted in pertinent part in No. 1384, Appendix F.

**Reprinted in Appendix A to this brief.

The action was tried in the United States District Court for the District of New Jersey in March 1966. The trial occupied eight court days. The District Court held claims 1 and 4 of the Willert patent invalid because of obviousness under 35 U. S. C. § 103. Infringement was litigated, but not adjudicated.

The United States Court of Appeals for the Third Circuit concluded, in a careful opinion, that the District Court had not correctly applied the legal test of obviousness in light of this Court's recent instructions in *Graham* v. *John Deere Co.*, 383 U. S. 1 (1966), and *United States* v. *Adams*, 383 U. S. 39 (1966). The Court of Appeals, relying on these recent authorities as "a guiding beacon" (1384, App. B, p. 54), held the Willert patent valid under § 103.*

2. The Background of the Invention in Suit

The Willert patent (581a, 62a),** as the Court of Appeals accurately stated (1384, App. B, p. 54),

> "relates to a plastics injection molding machine for plasticizing and delivering to a mold plastics materials at high speed and under high pressure, and under critically controlled conditions."

The outstanding characteristic of the Willert device is its ability, with speed, efficiency and simplicity, to achieve optimum mixing and plasticizing of a precise amount of any of a number of plastics materials having widely ranging

---

*These are the only proceedings in which the merits of the Willert patent have been adjudicated. The action in the United States District Court for the District of Connecticut, referred to at pages 2 and 6 of the petition in No. 1384, was commenced on February 23, 1968, and settled by defendant taking a license under the Willert patent. The action was dismissed on May 8, 1968. No other action relating to this patent is pending.

**Appendix for Appellants before the Court of Appeals, pages 581a and 62a.

properties. The Court of Appeals pointed out (1384, App. B, p. 59) that this vital characteristic is attributable to the "back pressure" feature and the "shot size control" feature —"the essence of Willert's claimed invention." On this point, the District Court correctly found (1384, App. A, p. 41):

> ". . . from the time of his first amendment of his application, Willert consistently, and with ultimate success in the Patent Office, maintained that the embodiment in a reciprocating, rotatable screw plasticizer of 'means for controlling back pressure and controlling the shot size', producing 'a properly homogenized and melted [predeterminable] amount of plastic' amounted to invention over the prior art." (Court's insertion)

Respondent Willert conceived his invention in 1950 and filed his application for patent in 1952. Since the 1930's many skilled workers in the plastics injection molding machine field had devoted much time and energy in a futile search for an adequate plasticizing and injection unit. The acute problem facing the industry are detailed both by the Court of Appeals (1384, App. B, pp. 55-56) and by the District Court (1384, App. A, pp. 21-22). Where many others in this country and abroad had failed, Willert had the perspicacity to find among the same components available to all in the field a new combination of old elements. By interrelating these old elements in his new combination, Willert succeeded in solving the industry's long-standing problem.

In 1958, respondent Egan Company became the exclusive licensee under the Willert patent. At the time of trial in March 1966, Egan Company had sold more than eleven million dollars worth of units under the Willert

patent (613a, 115a, 116a, 120a), and had granted licenses to practice the patented invention to seventeen domestic and foreign manufacturers (611a, 111a-112a).

Three industry witnesses (a molding machine manufacturer, a supplier of plastics resins and a molding machine user) testified to the striking advantages attributable to Willert's invention (164a-174a, 174a-183a, 189a-111a).

And, finally, as the Court of Appeals appropriately noted (1384, App. B, p. 62n), petitioner's executive vice-president had publicly acclaimed the virtues of the Willert type of device and had characterized "controlled back pressure" as "the real break-through" (637a, 187a-189a).*

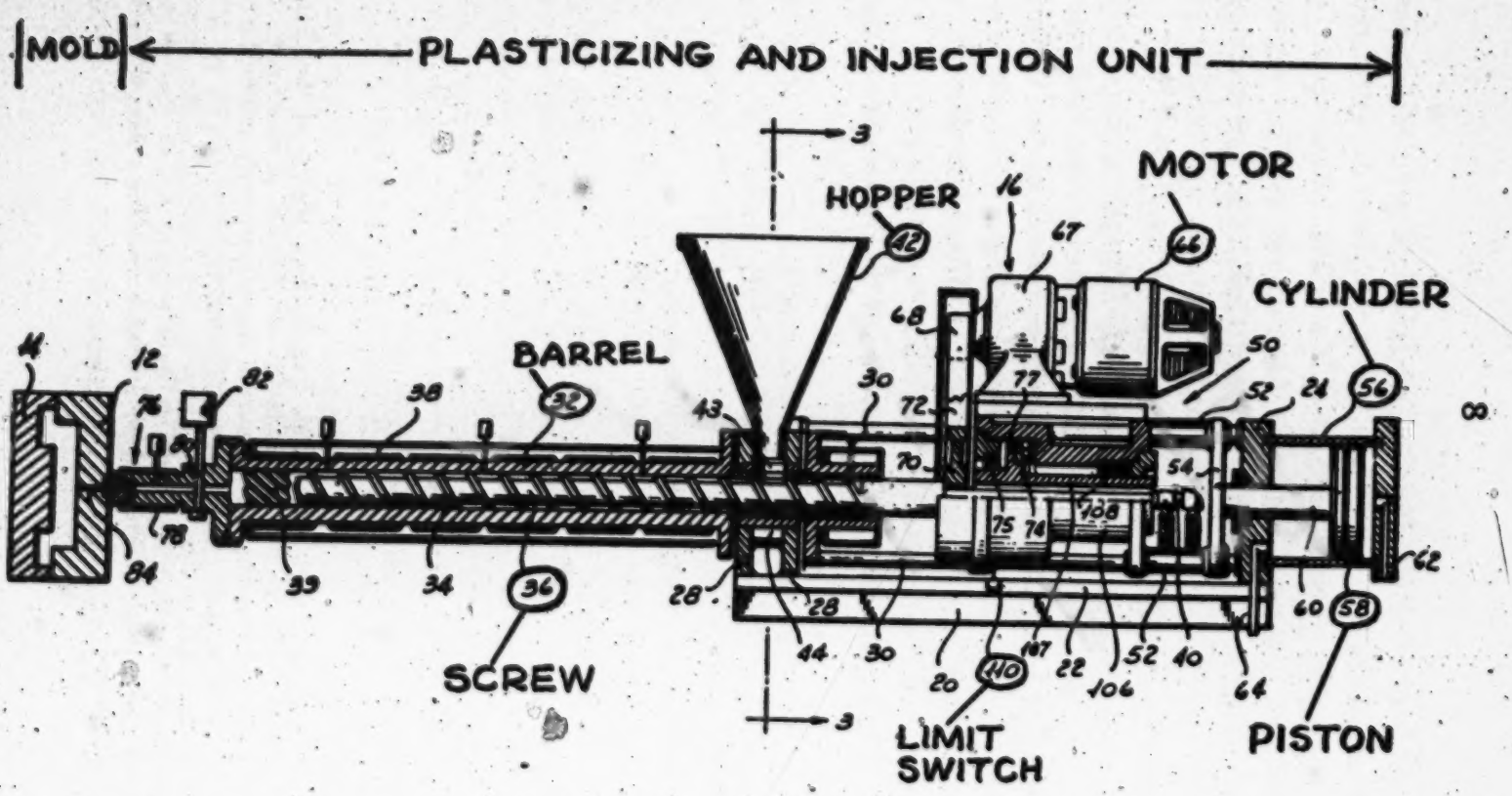
3. The Construction and Operation of the Patented Invention

An understanding of the construction and operation of the Willert unit puts into proper perspective the contentions made by petitioner. The opinion of the Court of Appeals summarizes admirably and accurately the Willert construction and operation (1384, App. B, pp. 58-59).

As illustrated in figure 2 of the Willert patent, reproduced on the next page, a plastics injection molding machine consists of two basic units: (1) the plasticizing and injection unit and (2) the mold. The placticizing and injection unit, to which the Willert invention is directed, is shown in detail; the mold, schematically.

---

*Petitioner's criticisms (1384, Pet. pp. 8-9, 16-17) of the Court of Appeals' reliance on this quotation are blended of equal parts of sophistry and semantics. The Court of Appeals properly and explicitly rejected these same contentions, declaring (1384, App. B, p. 62): "Notwithstanding the protestations of the defendant, the record adequately demonstrates that its own experts hailed the precise point of Willert's invention, the importance of the concept and its significance."


MOLD
PLASTICIZING AND INJECTION UNIT
3
HOPPER
42
16
MOTOR
46
47
CYLINDER
56
48
50
52
24
BARREL
32
30
72
77
43
14
12
82
38
70
54
75
74
108
78
84
39
34
36
28
28
62
60
58
44
30
20
110
107
22
52
40
106
64
3
SCREW
LIMIT
SWITCH
PISTON

The Willert plasticizing and injection unit consists of:

a plasticizing barrel 32,

a hopper 42 for feeding plastics resin, in the form of dry powder or pellets, into the barrel,

a screw 36 which rotates (turns) and reciprocates (Travels back and forth) within the barrel,

a motor 66 and appropriate gearing for rotating the screw,

a limit switch 110 for controlling the amount of rearward travel of the screw, and

a hydraulic cylinder 56, and piston 58 connected to screw 36, both parts of the hydraulic system which controls the magnitude of the "back pressure."

The hydraulic system, depicted fully in figure 4, reproduced on page 10, will be discussed presently.

Plastics resin is introduced through hopper 42 to the empty plasticizing barrel 32. The rotating screw 36 plasticizes (melts) and mixes the resin, and conveys it along the threads of the screw to the front of the closed barrel. As the plasticized resin accumulates in front of the rotating screw, it forces the screw to retreat (move rearwardly) in the barrel. The retreat of the screw, and its associated piston, is opposed and controlled by a selected, constant "back pressure" in the hydraulic system.

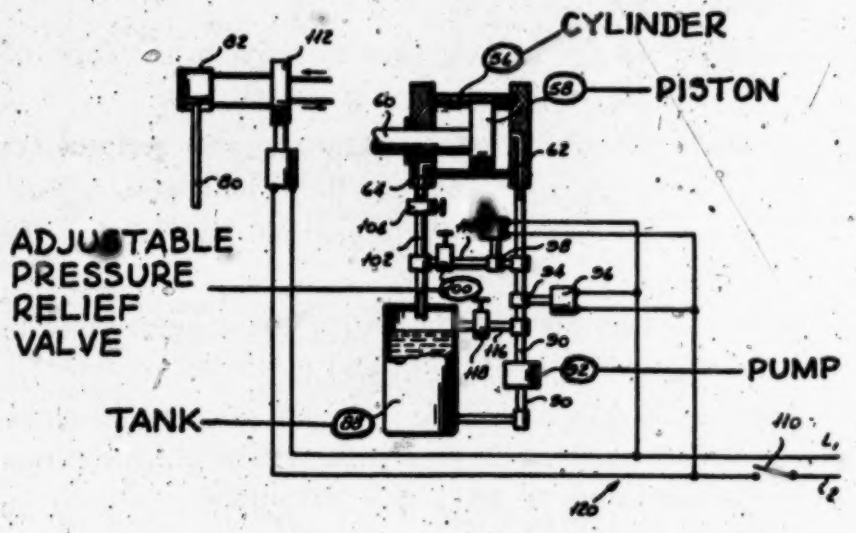
As illustrated in figure 4, *infra*, the hydraulic system is composed of:

the hydraulic cyclinder 56 and piston 58,

a pump 92,

a tank 88, and

adjustable pressure relief valve 100, and various connecting piping and valves.



As the screw is pushed rearwardly by the accumulating resin, piston 58 in figure 4 moves to the right, forcing oil out of cylinder 56, through port 62, pipe 114 and adjustable pressure relief valve 100, and into tank 88. The amount of "back pressure" constantly resisting the rearward movement of the piston and screw is selected by an appropriate setting of adjustable pressure relief valve 100.

The function of the adjustable pressure relief valve 100—to maintain at a selected magnitude the hydraulic force which opposes the travel of the piston and the screw in a rearward direction—together with the condition (i.e., open or closed) of the valves in the hydraulic system to achieve the desired hydraulic force are spelled out in the Willert patent at 586a, column 6, lines 8-16 (75a, 83a, 123a, 562a-563a):

> "The force at which the screw will retreat is controlled by the hydraulic cylinder 56, to which

the screw is connected through the medium of carriage 50. Referring to Fig. 4, at the described portion of the operating cycle valve 94 is closed, valve 98 is open, and *pressure relief valve 100 is set so that the feed screw retreats under a given thrust load.* During the retreating of the screw the oil from the cylinder 56 runs through pipes 90 and 102 back to the tank 88." (Emphasis added)

The significant advantages which accrue from the use of adjustable back pressure are set forth in the Willert patent specification at 584a, column 1, lines 55-65 (87a-88a):

> "Briefly the apparatus of the present invention when employed in conjunction with a mold such as that of an injection molding machine, produces a homogeneous mass of plastic compound free of volatile matter, air, or other condensable substances, in an optimum plasticized state to be injected into such mold or into a transfer cylinder, if the latter is used. The resulting molded article is characterized by its uniformity, freedom from strain, and the faithfulness with which it follows even the finest and most intricate details of the mold cavity."

The adjustable pressure relief valve 100 and associated hydraulic circuitry are called for by element (f) of Willert patent claims 1 and 4 in suit (587a):

> "means for selectively forcibly but yieldingly opposing reciprocation of the screw in the passage in a rearward direction."

The quantity of properly plasticized resin (i.e the "shot") permitted to accumulate in front of the screw is controlled by positioning limit switch 110 to the left or to

the right. The position of switch 110 is selected to stop rearward movement of the screw at the precise moment when the screw has retreated a distance sufficient to provide in the front of the barrel a quantity of plasticized resin equal to the volume of the mold employed. Thus, only the quantity of plastics material required for each mold cycle is plasticized and accumulated in front of the screw. This "shot size control" feature performs the important functions of increasing the degree of homogeneity of each charge and the uniformity of homogeneity from charge to charge.

The structure, and its operation, for controlling the size of the charge which accumulates in front of the screw is described in the patent at column 5, lines 1-8 (586a):

> "A limit switch, generally indicated at 110, is provided on the bed 22 of the unit 16, so as to be adjustable longitudinal of such bed, in such position as to be closed by the carriage 50 when the latter has traveled a predetermined distance to the right. As a result the volume of the plastic material receiving reservoir 39 may be adjusted so as substantially to equal the volume of the mold employed."

Element (g) of patent claims 1 and 4 describes this feature of the Willert invention.

When the rearward movement of the screw is stopped upon the tripping of limit switch 110, the accumulated charge is ready for injection into the mold. With the mold in condition, i.e., empty and closed, to receive a new charge, the Willert circuitry causes appropriate resetting of the valves in the hydraulic system so as to cause pump 92 to exert a large hydraulic force on the right hand face of piston 58. This propels the piston to the left, forcing the screw rapidly forward and injecting the accumulated plasticized resin into the mold.

With the screw in its most forward position in the barrel, the cycle of plasticization, accumulation and injection of a new charge is ready to be repeated.

The Court of Appeals' opinion (1384, App. B, pp. 55-59) reflects a thorough and accurate understanding of Willert's inventive contribution, including not only the construction and operation of the patented invention but also the advantages which flow from its utilization.

4. The Prior Art

No prior art patent or publication, including the one on which petitioner's unsuccessful motion to vacate, etc., and its petition in No. 1408 are based, shows or suggests the inventive contribution of Willert. The conceded fact that each structural element of Willert's patented combination was old does not diminish the magnitude of his contribution. On the contrary, the circumstance that other workers in the art had available to them the same structural elements as those ultimately selected and combined by Willert underscores the extent of Willert's advance. The Court of Appeals' opinion, specifically recognizing that the Willert combination was made up of old elements (1384, App. B, p. 61), unhesitatingly and properly held the patent valid. In doing so, it accorded to the Willert combination patent the same cachet of patent validity accorded to other unobvious combinations of old elements, e.g., *United States* v. *Adams*, 383 U. S. 39 (1966).

Petitioner's principal position appears to be that each prior art reference relied on in No. 1384 teaches the concept of utilizing adjustable back pressure to compact the plastic (1384, Pet. pp. 12, 13). Taking each reference briefly and chronologically, it is clear that none, nor a collection of any of them, teaches this significant aspect of the Willert invention:

1. The Italian patent (658a, 236a), applied for in 1940, suggests the use of a reciprocating screw to mold articles

of rubber. Petitioner's expert witness conceded (311a), and the Court of Appeals properly stated (1384, App. B, p. 62), that the Italian patent makes no mention of adjustable back pressure.

2. The Wiedmann patent (683a, 255a), applied for in 1942, shows a means for controlling a "back pressure" on the cutting edge of a machine tool. Petitioner here asserts, notwithstanding the absence of any supporting evidence in the record, that Wiedmann's arrangement maintains a "constant back-pressure" (1384, Pet. p. 15). This is wrong. The Wiedmann patent calls for a midstroke change in hydraulic pressure from "relatively high" to "low" (686a, col. 2, lines 33-60). Wiedmann's device serves a function foreign to that employed by Willert in his plastics injection molding machine. The Court of Appeals correctly characterized Wiedman's hydraulic system as "in a different context" and "remote cited art" (1384, App. B, p. 61).

3. With regard to Beck's German patent application (725a, 276a), filed in 1943, both petitioner's patent expert and Beck himself, petitioner's trial expert on plastics and plastic machinery, conceded (352a-353a, 388a-390a) that the Beck application makes no mention of adjustable back pressure. Indeed, there is no reference, written or pictorial, in the patent to the concept of applying or controlling any pressure to resist the rearward travel of the screw.

4. The Willcox patent (680a, 249a), applied for in 1950, has a screw which is pulled rearwardly by hydraulic force. The screw is not, and because of the design of the machine cannot be, forced to retreat by the accumulation of plasticized material in front of the screw, as both petitioner's patent expert and respondents' expert agreed (306a, 550a-552a). Petitioner's patent expert agreed also

that as Willcox's screw is pulled rearwardly, there is no adjustable back pressure (309a). With a characteristic unwillingness to recognize any testimony or evidence unfavorable to its position, petitioner blindly persists in contending here (1384, Pet. p. 11) that Willcox "shows a control valve which is used to permit the screw to retreat and opposes retreat . . ." Such a valve is nowhere to be found in the written or diagrammatic description of the Willcox device. Indeed, Willcox refers only in passing to "a valve arrangement" which he plainly says is "not shown" (682a, col. 3, lines 17-18).

5. The Beck article (741a, 434a), published in 1950, refers briefly to a reciprocating screw machine (757a) and is conspicuously silent with regard to any pressure opposing rearward travel of the screw, to say nothing of an adjustable back pressure.

The Beck article is noteworthy only for its recitation of the serious problems facing the injection molding machine designer seven years after the filing of Beck's German patent application which, petitioner asserts, teaches Willert's solution.

In 1950, Beck wrote (751a):

> "The basic problem of the injection molding machine is the *injection cylinder* in which the injection molding compound must be placed in a necessary and sufficiently plastic state. Here it is necessary to master a problem of heat engineering, which affords no little difficulty." (Emphasis in original)

Finally, the 1925 patent to Kaiser (1408, App. B), the subject of No. 1408, is not newly discovered, shows no more than the art considered by the Patent Office and by the courts below and is dissimilar from the patent in suit. The Kaiser patent was cited in the Patent Office as a reference

against the application for the 1949 Cousino patent 2,471,-813 (689a, at 694a, 260a). The Cousino patent, in turn, was cited by the Patent Office against Willert's patent application (588a) and relied upon by petitioner in both courts below. Both Cousino and Kaiser show an extruder with a feed screw which acts as a valve by oscillating slightly against a hydraulic force or a spring force or both. The screw does not and cannot retreat in the barrel during plasticization to accumulate a charge and does not and cannot move forward to inject the charge into a mold. Kaiser was readily available to petitioner below, it adds nothing to the prior art considered by each tribunal below, and it differs distinctively from the Willert invention.

The facts plainly demonstrate, as the Court of Appeals correctly held (1384, App. B, pp. 61-62):

> "Here, in our view, Willert employs a method of achieving the result needed by the industry conceptually different from that disclosed by the prior art, and indeed, uses the hydraulic 'back pressure' in a manner neither indicated by the prior art nor obvious to a person skilled in the art, at least on the record of this case.
>
> * * *
>
> "It remained for Willert to recognize that adjustable back pressure, of sufficient magnitude, created through the use of hydraulic force opposing the retreat of the screw, resulted in eliminating substantial problems of the industry. It is the back pressure which causes more internal heat to be generated, obtaining greater uniformity of heat and its distribution, so essential to the proper plasticization and homogenization of the plastics material; speeds up the process, and reduces the likelihood of air bubbles and similar disruptive occurrences.
>
> * * *

"In summary, we conclude that the Willert invention is novel, has utility and not obvious to one having ordinary skill in the art to which its subject matter pertains, and that it represents a significant advance in the field."

Reasons for Denying the Writs

1. The Judgment and Order of the Court of Appeals Are Correct

At the outset of its opinion, the Court of Appeals carefully framed the question before it (1384, App. B, p. 53):

> "Did the District Court correctly apply the controlling legal test of 'obviousness' of Section 103 of the Patent Act of 1952, 35 U. S. C. A, . . .?"

To resolve that question, the Court of Appeals turned (1384, App. B, pp. 54-55, 60-62) to the provisions of 35 U. S. C. § 103 and to the recent opinions of this Court in *Graham* v. *John Deere Co.*, 383 U. S. 1 (1966), and *United States* v. *Adams*, 383 U. S. 39 (1966).

After "applying the teachings of the *Graham* and *Adams* cases" (1384, App. B, p. 55), the Court of Appeals correctly decided that the District Court had misapplied those teachings (e.g., App. B, p. 61) and that "the claimed invention was not 'obvious' within the statutory meaning . . ." (1384, App. B, p. 55). The Court of Appeals gave "measured weight" to the so-called secondary considerations and concluded that the Willert invention "represents a significant advance in the field" (1384, App. B, p. 62).

Petitioner seeks to undercut the soundness of these holdings by contending that respondents misled the Court

of Appeals in asserting there a "new theory" (1384, Pet. pp. 7-8) that the "alleged novel concept" was "adjustable back pressure" (1384, Pet. p. 6, also p. 7), said by petitioner to be an "afterthought" (1384, Pet. p. 11) and a "fiction" (1384, Pet. p. 12). The captious character of this contention is exposed by the following:

The District Court found as a fact that (1384, App. A, p. 41; *supra*, p.6):

> ". . . from the time of his first amendment of his application, Willert consistently . . . maintained that the embodiment in a reciprocating, rotatable screw plasticizer of *'means for controlling back pressure* and controlling the shot size', producing 'a properly homogenized and melted [predeterminable] amount of plastic' amounted to invention over the prior art" (Court's insertion; our emphasis)

In addition, the District Court epitomized respondents' contentions in that court as follows (1384, App. A, p. 38):

> "In short, plaintiffs [respondents] state that 'the crux of the Willert invention is this adjustable back pressure which resists the rearward movement of the screw.'"

In the Court of Appeals, respondents continued to urge, as they had consistently urged in the Patent Office and in the District Court, and as they urge in this Court:

> "The important part of Willert's invention was his recognition of the extraordinary advantages which would flow from adjustable back pressure and from shot size control. Nobody had recognized this before Willert." (Brief for Appellants, p. 27)

* * *

> "The invention in Willert's new combination lies in the recognition, by Willert alone, after many failures by others, that the critical, long-standing problem of controlling resin plasticization could be solved by providing an adjustable back pressure against which the plasticizing screw could retreat." (Reply Brief, p. 8)

Thus, it is manifest that since the pendency in the Patent Office of the application for the Willert patent, it has consistently been, and continues to be, respondents' position that Willert's inventive contribution lay in his perception of the unexpectedly beneficial role that adjustable back pressure, in concert with other elements, could play in an injection molding machine. This inventive contribution of adjustable back pressure to the injection molding art is a vital fact, not a "fiction". Petitioner's own *ex-litem* public utterances make this plain (637a; *supra*, p. 7):

> "The actual charging of the front chamber under controlled back pressure is the real break-through in this new plasticizing concept."

And the Willert patent specification and claims illustrate, describe in words, and claim this adjustable back pressure feature, *supra*, pages 7-13.*

---

*With respect to claims 1 and 4, petitioner asserts (1384, Pet. p. 11) that the claims must be construed as calling for "any means" for applying the appropriate back pressure, and, thus, are "anticipated" by the prior art. This assertion is in plain disregard of the language of 35 U. S. C. § 112, upon which petitioner relies, and which specifies that a "means" claim "shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." It also distorts the doctrine of "anticipation", which applies only when the entire claimed invention is "identically disclosed or described" in a single prior art reference, 35 U. S. C. § 103, *Bates* v. *Coe*, 98 U. S. 31, 48 (1878).

What petitioner fails to come to grips with, and seeks to divert this Court's attention from, is that the District Court as a matter of law applied an improper test of patentability to the Willert invention. The District Court held that, because a structural element, which could have been (but had never been) used to select and maintain a back pressure in a plastics injection molding machine, was in the prior art, the combination invented by Willert was obvious *per se* (1384, App. A, pp. 49-50).

But as this Court stated in *United States* v. *Adams*, 383 U. S. 39, 50 (1966):

> "It begs the question . . . to state merely that magnesium and cuprous chloride were individually known battery components. If such a combination is novel, *the issue is whether bringing them together as taught by Adams was obvious in light of the prior art.*" (Emphasis ours)

It is this definition of the issue which the Court of Appeals properly adopted and correctly applied to the controlling facts (1384, App. B, pp. 61-62). In holding that Willert's invention was not obvious, the Court of Appeals expressly rejected the District Court's erroneous *"per se"* test of patentability (1384, App. B, p. 61):

> ". . . the mere fact that the elements are concededly old does not itself militate against patentability, as the District Court seems to suggest,"

and accurately observed (1384, App. B, p. 62):

> "It remained for Willert to recognize that adjustable back pressure, of sufficient magnitude, created through the use of hydraulic force opposing the retreat of the screw, resulted in eliminating substantial problems of the industry."

As for No. 1408, no timely or adequate showing has been made to support any grant of relief to petitioner under the provisions of Rule 60(b), F.R.C.P. *Hazel-Atlas Co.* v. *Hartford Co.*, 322 U. S. 238 (1944) (1408, Pet. pp. 4-5), is not apposite. There is no suggestion of fraudulent conduct here and none exists.

Borg-Warner Corporation v. *Mall Tool Company*, 220 F. 2d 803 (7 Cir. 1955), cert. denied 349 U. S. 946 (1955), cited by petitioner (1408, Pet. p. 5), is, however, singularly apposite. In that patent case, the Court of Appeals denied defendant's motion to reopen its decision reversing in part a trial court judgment in favor of defendant. The court held (220 F. 2d at 806) that defendant had not met "the prerequisite for the allowance of a motion such as this . . . that the prima facie evidence be of such weight as to necessitate a different result. . . ." Our discussion, *supra*, pages 15-16, demonstrates that this petitioner, both in this Court and in the Court of Appeals, has failed to satisfy that prerequisite.

2. There Is No Special or Important Reason for Reviewing This Case on Certiorari

The decision of the Court of Appeals on the merits is in accord, rather than in conflict, with the recent opinions of this Court in the *Graham* and *Adams* cases. Those opinions recited fully and clearly the considerations pertinent to the application of the provisions of 35 U. S. C. § 103 to the facts germane to the legal question of obviousness. The decision of the Court of Appeals has done nothing to unsettle any important question resolved in those cases.*

---

*Notwithstanding its earlier contentions to the contrary (1384, Pet. p. 5), petitioner ultimately acknowledges (1384, Pet. p. 13) that this Court has recently dealt in full with the patent validity question presented here.

In an endeavor to create an artificial air of unusual importance, petitioner asserts that "numerous manufacturers" here and abroad have been "threatened", raises the spectre of "numerous additional suits", and attributes virtual omnipotence to respondents in having "forced 17 licensees into an agreement" (1384, Pet. pp. 6, 17). The fact is that the majority of the industry has paid tribute to the Willert patent by accepting licenses at a reasonable royalty under the patent. Industry witnesses, only one of whom was a licensee, testified enthusiastically to the extraordinary results achieved with the Willert invention. And, significantly, no suit has been brought by a declaratory judgment plaintiff.

Moreover, the judgment and the order of which review is here sought are not final. This fact, "of itself alone", is sufficient ground for denial of these petitions, *Hamilton Shoe Co.* v. *Wolf Brothers,* 240 U. S. 251, 258 (1916).

Conclusion

These petitions represent nothing more than attempts by a defeated litigant to obtain further review on the merits of a judgment of patent validity. Petitioner has had more than his day in court on this issue. His contentions, repeated once more here, have already been three times rejected by the Court of Appeals. The Court's remarks in *Magnum Co.* v. *Coty,* 262 U. S. 159, 163 (1923) apply with equal force here:

> ". . . The jurisdiction [to bring up cases by certiorari] was not conferred upon this Court merely to give the defeated party in the Circuit Court of Appeals another hearing."

The instant petitions are open to question from the procedural standpoint and are lacking in substantive merit. They should be denied.

Respectfully submitted,

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May 14, 1968

Appendix A

Rule 60, Federal Rules of Civil Procedure

"Relief From Judgment or Order"

* * *

"(b) **Mistakes; Inadvertence; Excusable Neglect; Newly Discovered Evidence; Fraud, etc.** On motion and upon such terms as are just, the court may relieve a party or his legal representative from a final judgment, order, or proceeding for the following reasons: (1) mistake, inadvertence, surprise, or excusable neglect; (2) newly discovered evidence which by due diligence could not have been discovered in time to move for a new trial under Rule 59(b); (3) fraud (whether heretofore denominated intrinsic or extrinsic), misrepresentation, or other misconduct of an adverse party; (4) the judgment is void; (5) the judgment has been satisfied, released, or discharged, or a prior judgment upon which it is based has been reversed or otherwise vacated, or it is no longer equitable that the judgment should have prospective application; or (6) any other reason justifying relief from the operation of the judgment. The motion shall be made within a reasonable time, and for reasons (1), (2), and (3) not more than one year after the judgment, order, or proceeding was entered or taken. A motion under this subdivision (b) does not affect the finality of a judgment or suspend its operation. This rule does not limit the power of a court to entertain an independent action to relieve a party from a judgment, order, or proceeding, or to grant relief to a defendant not actually personally notified as provided in Title 28, U. S. C., § 1655, or to set aside a judgment for fraud upon the court. Writs of coram nobis, coram vobis, audita querela, and bills of review and bills in the nature of a bill of review, are abolished, and the procedure for obtaining any relief from a judgment shall be by motion as prescribed in these rules or by an independent action."

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IN THE

Supreme Court of the United States

OCTOBER TERM 1967

No. 1384 AND No. 1408

MODERN PLASTIC MACHINERY CORP.,

Petitioner,

vs.

FRANK W. EGAN & COMPANY and
WILLIAM H. WILLERT,

Respondents.

PETITIONER'S REPLY BRIEF IN OPPOSITION TO RESPONDENTS' BRIEF

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Introduction

A reply brief is required in the present case because Respondents found fit to introduce new arguments first raised in the brief in opposition and to continue their misleading tactics by either submitting incomplete presentations contrary to the facts or by avoiding the issues on the merits altogether.

It is rather surprising to find that Respondents still make an attempt to allege validity of Claims 1 and 4 of the patent in suit, in spite of the fact that the newly presented Patent No. 1,533,191 to Kaiser *et al.* amounts to a complete anticipation of the alleged novel concept of Willert under 35 U.S.C. 102.

This reply brief is respectfully submitted under Rule 24(4) of the Supreme Court of the United States.

Respondents attempt to characterize the present case as an *ordinary* patent suit. Yet on page 22 of Respondents' brief they state as follows:

> "The fact is that the *majority* of the industry has paid tribute to the Willert Patent by accepting licenses at a reasonable royalty under the patent."

It appears, as presented in 611a, that 12 U. S. companies and 5 foreign companies, located in Sweden, Switzerland, Germany and Japan have been licensed under the patent in suit and many other companies in the U. S. and foreign countries have been threatened with litigation for alleged infringement of the Willert patent. The allegation that the present case is an ordinary patent suit is thus contradicted by Respondents' own statements.

Questions Presented

Respondents raised the procedural question, whether or not review by this Hon. Court of the judgment rendered by the Court of Appeals remanding this cause to the District Court to determine the issue of infringement or review of the order denying Petitioner's motion, is premature. There cannot be any doubt that the judgment on the issue of validity of the patent in suit is *final* and appeal lies to this final judgment only during a 90-day period. If no appeal would be taken during this term, Petitioner would be deprived of the right to appeal. Finally, in case of a reversal of the judgment of the Court of Appeals, the issue of infringement would be moot, and the entire case would be terminated.

Respondents refer in addition to a separate question raised by the second-filed petition, whether or not this Court should consider, or should order either court below

to consider, evidence not made a part of the record in the trial court. The apparent reason is the public interest involved with patents and also that both the *validity and infringement issues* are integrally related in patent controversies. In

> *Gairing Tool Co.* v. *Eclipse Interchangeable Counterbore Co.*, 48 F. 2d 73 (6th Cir. 1930), reh. denied;

The Court said:

> "If such evidence be sufficient, to avoid a decree of injunction and accounting against other manufacturers or users, the Appellant should not be the only manufacturer so enjoined.
>
> . . .
>
> It is accordingly ordered herein that the mandate be stayed, the decree of affirmance heretofore entered herein be suspended, that leave be granted to file a petition in the District Court to reopen this cause, and that the cause be remanded to the District Court for the purpose of entertaining such petition; but should such petition to reopen be granted, it is further ordered that Appellant pay to Appellee the sum of $2,500.00 expenses and counsel fees, as a condition for securing such relief."

The law in such situation has been clearly stated in the legal memorandum attached to Petitioner's motion in the Court of Appeals.

On page 9 of said motion Petitioner offered the assumption of costs and attorney fees for the requested additional proceeding, *in spite of the fact* that the late presentation of the new evidence was caused solely by the fact, that Respondents *in a shift of their position* produced a new concept never raised before and particularly not before the District Court, as will be set forth below.

Statutes and Rules

Rule 52(a), F.R.C.P., is definitely involved because the Court of Appeals ignored the finding of fact by the District Court without declaring such findings of fact as "clearly erroneous" and was bound to accept such findings. As a matter of fact, the Court of Appeals based its decision on facts which are in clear contradiction with the findings of fact by the District Court.

35 U.S.C. 101 and 102 are also pertinent on the substantive question. The District Court in its opinion disposed of § 102 by stating that "there is also a question of novelty of the patent in suit, but what will be said as to obviousness will be dispositive of this case."

Statement of the Case

1. The Proceedings Below

Respondents stated on page 5 of their brief that the U. S. Court of Appeals for the Third Circuit concluded, in a careful opinion, that the District Court had not correctly applied the legal test of obviousness in light of this court's recent instructions in *Graham* v. *John Deere Co.*, 383 U. S. 1 (1966), and *United States* v. *Adams*, 383 U. S. 39 (1966). It will be shown below that the Court of Appeals erred in the application of *United States* v. *Adams* (*supra*).

Respondents also make reference in a footnote in their brief to the action in the United States District Court for the District of Connecticut, referred to at pages 2 and 6 of the petition in No. 1384 indicating that said action was settled by Defendant taking a license under the Willert patent. Yet, Defendant in said action consulted counsel for Petitioner herein jointly with its general counsel and patent counsel and in spite of its stated conviction of invalidity of the Willert patent by said Defendant and its counsels, a license under the Willert patent has been taken

solely because said Defendant considers the litigation expenses as prohibitive. It should be stated in this connection that several other licensees under the Willert patent approached counsel for Petitioner herein through their counsel and likewise indicated their conviction of invalidity of the Willert patent, yet did choose a license in order to save litigation expenses.

2. The Background of the Invention in Suit

Respondents stated on page 5 of their brief that "the Willert patent relates to a plastics injection molding machine for plasticizing and delivering to a mold plastics material at high speed and under high pressure, and under critically controlled conditions." Respondents further stated on page 6 that since the 1930's many skilled workers in the plastics injection molding machine field had devoted much time and energy in a futile search for an adequate plasticizing and injection unit. Finally Respondents state that by interrelating old elements in his new combination, Willert succeeded in solving the industry's long standing problem.

The patent specification of Willert states in column 1, lines 18 to 21 (584a) "in its broadest aspects, such mechanism can be employed without a mold, for example as a supply for plastic material in plastic blow molding operations" and in column 1, lines 23 to 25, "the mechanism of the invention delivering plasticized material under high pressure into the mold . . ." The same means, functioning in exactly the same manner, have been shown as known in the prior art considered by the District Court and in particular also in Kaiser *et al.*

Apparently in their desperation Respondents continue the allegation of a notion that Willert is the inventor of features clearly found in the prior art as will be set forth below, though it should be clear to Respondents, that the plasticizing and injection unit alleged to be Willert's in-

vention is found in the prior art, pertinent to the patent in suit.

Respondents make reference on page 12 of their brief to a limit switch to be adjustable longitudinal of the bed 22, in such position as to be closed by the carriage 50 when the latter has traveled a predetermined distance to the right.

In the District Court opinion (A 43) Judge Wortendyke stated: "In the Goessling application of Dec. 21, 1942, column 2, line 55 of the specification it is said: '*In accordance with common practice,* automatic controls (not shown) are provided so that the mold and ram are operated in proper timed relation and in repeated cycles.'" The District Court opinion quotes on page 40, App. A, a rejection letter of the Patent Office where the Examiner states in connection with the limit switch as follows: ". . . This is particularly true since Dinzl discloses the actuation of a switch to actuate a control circuit which actuation is caused by a rearward movement of the injection ram. Therefore no invention is seen in controlling the operation of the apparatus of the Italian patent automatically, the control means being responsive to the rearward movement of the screw."

3. The Prior Art

Respondents stated on page 13 of their brief that "the conceded fact that each structural element of Willert's patented combination was old does not diminish that magnitude of his contribution" and Respondents state further that "the Court of Appeals' opinion, specifically recognizing that the Willert combination was made up of old elements unhesitatingly and properly held the patent valid". In this connection Respondents make reference to *United States* v. *Adams,* 383 U. S. 39 (1966).

It is amazing that Respondents still dare to compare the situation found in the patent in suit with the situation

applied by this Hon. Court to *United States* v. *Adams* (*supra*).

The patent adjudicated in the *Adams* case relates to a non-rechargeable, as opposed to a storage, electrical battery, and the battery comprises two electrodes one made of magnesium, the other of cuprous chloride, which are placed in a container. If the use of magnesium for zinc and cuprous chloride for silver chloride were merely equivalent substitutions, it would follow that the resulting device, namely *Adams'*, would have equivalent operating characteristics, but it does not. The Court below found, and the Government apparently admits, that the *Adams'* battery *"wholly unexpectedly"* has shown "certain valuable operating advantages over other batteries." The operating characteristics of the *Adams'* battery have been shown to have been *unexpected* and to have far surpassed then-existing wet batteries. Since the *Adams'* battery brought about an unexpected result and novel function, the *Adams'* battery was found as nonobvious.

The adjustable back pressure as found in the prior art uses the same structural elements and functions in the same manner as in the Willert structure, and even Respondents do not claim that the Willert patent brings about an unexpected result. Thus *no unexpected result* is found in the Willert patent and for this reason the present case falls completely into the doctrine of *Graham* v. *John Deere Co.* (*supra*), and *not* into the doctrine of *United States* v. *Adams* (*supra*).

While the term "adjustable back pressure" was used in the above discussion, emphasis must be made to the fact that neither the specification of Willert, nor the claims of the Willert patent make reference to such term and no definition can be found therefor as an antecedent in Willert's specification. It is evident the Respondents present reliance upon this feature was the afterthought of an astute patent trial lawyer.

Yet Rule 75* of the Rules of Practice of the United States Patent Office expressly requires that the specification provides an antecedent for such term.

1. The Italian patent (658a) makes mention of back pressure without mentioning adjustability thereof, yet claims 1 and 4 of the patent in suit *lack likewise the call* for adjustability of back pressure.

2. Respondents state on page 14 of their brief, again in a surprisingly daring manner that "Wiedmann's device serves a function foreign to that employed by Willert in his plastics injection molding machine". Wiedmann (683a) states in his specification on page 1, left column, lines 1 to 4 (685a) that:

> "this invention relates *primarily to hydraulic transmissions,* the motors of which should have a back pressure maintained thereon during a part of a cycle of operations . . ." (emphasis added)

and on page 1, column 1, lines 11 to 15:

> "for the *purpose of illustration,* the invention will be explained as applied to a broaching machine having a

---

*Rule 75. Claim. (a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

(b) More than one claim may be presented provided they differ substantially from each other and are not unduly multiplied.

(c) When more than one claim is presented, they may be placed in dependent form in which a claim may refer back to and further restrict a single preceding claim.

(d) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

vertically reciprocable tool slide but it is to be understood that the invention is not limited to such use."

It is thus evident that Wiedmann had no intention to limit his invention to a broaching machine and applied his invention merely by example and in compliance with the Rules of Practice of the United States Patent Office to a broaching machine. The Wiedmann patent relating to a hydraulic transmission clearly discloses hydraulic controls in which adjustable back pressure is applied, and is available to a man skilled in the art looking for hydraulic controls.

Respondents even lose themselves in denying Petitioner's assertion that Wiedmann's arrangement maintains a "constant back-pressure". While Respondents claim that such statement by Petitioner is wrong, attention is called to the specification of Wiedmann and in particular to page 2, right column lines 6 to 9 (686a) where it is stated:

> "downward movement of piston 3 is at first resisted by the combined resistances of resistance valves 10 and 21 which maintain a *predetermined back-pressure* on piston 3."

It is not surprising to find that Respondents accuse Petitioner to be wrong, when actually Respondents are wrong. Where else would the man skilled in the art look for a hydraulic control in combination with adjustable back-pressure than in the art for hydraulic transmissions. The holding of the Court of Appeals that Wiedmann's hydraulic system is "in a different context" and pertains to "remote cited art" is not understood and is obviously made in error, particularly since the application of the hydraulic control to a broaching tool is given by example only and the broaching tool is even not shown in the drawings (see Wiedmann's specification, page 2 left column lines 66 and 67, 686a).

3. Concerning the Willcox patent, Respondents confine themselves to the statement that "Petitioner's patent expert agreed also that as Willcox's screw is pulled rearwardly, there is no adjustable back-pressure (309a, 550a)". It is just amazing that Respondents dare to present to this Hon. Court the quoted statement without adding the clear withdrawal by the same expert of said statement and attention is called to the following additional testimony (366a) of the same patent expert:

> "A. I made that statement but it was an error. That conclusion is wrong. There is back pressure in the Willcox patent, as I repeatedly said, when the liquid is expelled from a cylinder by movement of the piston and looking at Willcox by movement of the piston 28 to the right, the liquid behind the piston exits through the conduit 32 and the resistance set up by the pressure of the fluid is a back pressure. There is a back pressure (770) in Willcox.
>
> Q. Is that the reason why there must be a back pressure? Would you elaborate on this point? Please explain very clearly to the Court why there must be a back pressure. A. There must be a back pressure because when the fluid comes in through port 32 to move the piston all the way to the left, the cylinder is filled with fluid and when fluid is admitted through port 32 to move the piston to the right, that fluid behind the piston 28 is restricted in its flow through the passage 32 and a reaction, a force or pressure is set up in that liquid as it is forced through the orifice 32 which is small in comparison to the diameter of the piston, such that there is a resisting force in the fluid to the advance of the piston 28 rearwardly."

The reference to an exhaust conduit system under the control of a valve arrangement (not shown) completes the anticipation of "adjustable back pressure" by using *a control valve* (682a), as disclosed in Willcox.

It has been stated above that Respondents throughout the proceedings maintained that adjustable back pressure is a novel feature conceived by Willert, yet Respondents shifted their position for the first time in Appellants' reply brief before the Court of Appeals and on page 10 of that reply brief Respondents pointed to the fact that Judge Wortendyke's holding of obviousness turns on his view that because the means described by Willert to adjust and control back pressure—a pressure relief valve in the hydraulic system—was structurally old, as shown by Wiedmann, and "functioned" in Wiedmann, its use with the other conventional elements of a reciprocating screw injection molding machine could not amount to invention, because that "function" was known to the art.

Respondents presented for the first time in said reply brief that the legal test of obviousness in this case is *not* whether means for adjusting back pressure could readily be selected once someone had the concept of making such adjustments to control plasticizing in an injection molding machine. Rather the test is whether this concept itself was obvious, referring erroneously to *United States* v. *Adams* (*supra*).

Obviously, Respondents realized that they could not deny any more that Wiedmann stands for adjustable back pressure and shifted to the theory that the invention of Willert resides in the application of such adjustable back pressure, as known *per se* by Wiedmann, to control plasticizing of plastic material. If Respondents would have taken such position before the District Court, the Kaiser *et al.* patent would have been produced before which clearly stands for the fact that the use of adjustable back pressure to control plasticizing of plastic material was available in the 1930's. As a matter of fact, the concept of using adjustable back pressure to control plasticizing of plastic material is clearly anticipated under 35 U.S.C. 102 by Kaiser *et al.*, and no more only by 35 U.S.C. 103 on the ground of obviousness.

It is rather significant that the fact that the 1925 patent to Kaiser *et al.* (1408 App. B), the subject of No. 1408, which amounts to a complete anticipation of the concept of plasticizing plastic material in a plastic feeding machine, is completely ignored under 35 U.S.C. 102 by Respondents and merely put aside by a statement, that shows no more than the art considered by the Patent Office and by the Courts below is dissimilar from the patent in suit, which statement is made on page 15 of Respondents' brief and on page 16 it is merely added that Kaiser was readily available to petitioner below, it adds nothing to the prior art considered by each tribunal below and it differs distinctly from the invention. It is utterly absurd not to recognize that the last retreating point by Respondents is clearly taken away by the Kaiser *et al.* patent and it is undoubtedly for this reason why Respondents do not dare to enter a discussion on the merits of the Kaiser *et al.* patent or even to hint where any distinction could be found between the structure of Willert, on the one hand, and the Kaiser *et al.* structure, on the other hand, particularly concerning the concept of employing adjustable back pressure for the purpose of plasticizing the plastic material in a plastic feeding machine.

In their usual misleading and confusing manner, Respondents even do not hesitate to state that the patent to Kaiser *et al.* (App. B) the subject of No. 1408 is not duly discovered, *shows no more than the art considered by the Patent Office* and by the Courts below and is dissimilar from the patent in suit. There is no basis in fact that the Patent Office considered the Kaiser *et al.* patent.

The fact is rather that the following references were cited in the file of the Willert patent taken at the bottom of col. 10 of the Willert patent (588a).

References cited in the file of this patent

UNITED STATES PATENTS

2,359,839	Goessling	Oct. 10, 1944
2,402,805	Cousino	June 25, 1946
2,471,813	Cousino	May 31, 1949
2,493,805	Dinzl	Jan. 10, 1950
2,629,132	Willcox	Feb. 24, 1953

FOREIGN PATENTS

420,839	Italy	Mar. 9, 1947

Since this patent has not been cited by the Patent Office and has not been considered by the Patent Office or the Courts, the presumption of validity of the Willert patent is of course extremely weakened. Notwithstanding Respondents' attempt to minimize Kaiser *et al.*, this reference teaches the very same concept on which Respondents wish to base their invention.

Reasons for Denying the Writs

Surprisingly, the Court of Appeals, as stated on page 17 of Respondents' brief, gave "measured weight" to the so-called secondary considerations and concluded that the Willert invention "represents a significant advance in the field" (1384, App. B, p. 62). Without any reasoning the Court of Appeals again ignores the findings of facts, so well stated in the correct and able opinion of the District Court, namely that Judge Wortendyke disclosed his findings of facts as follows:

> "We need not consider the effect of such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc. in this case. As was brought out upon the direct examination of Willert by Defense Counsel, *it is obvious that the so called*

Egan machine with the trademark Reciproscrew is not the embodiment of the Willert patent under which it has an exclusive license."

What was said by the Court in *Photon Inc.* v. *Harris-Intertype Corp.*, 235 F. Sup. 921, 927 (D. Mass. 1964, Aff'd *per curiam* 349 F. 2d 856 (1st Cir., 1965), cert. denied, 382 U. S. 1011 (1966) *sub nom. Tansel* v. *Photon Inc.*, is equally applicable and I quote: "It is significant to note that Plaintiff . . . did not come into Court and offer evidence of having previously marketed a machine based on the . . . [Willert patent] which has enjoyed any commercial success whatsoever and which . . . [Plaintiff] claims Defendant has pirated." (Insertions by Judge Wortendyke.) How under the circumstances the Court of Appeals could consider secondary considerations, if no commercial success has been found in the findings of fact, is entirely unclear and Respondents rely on such erroneous considerations.

Respondents accuse Petitioner that Petitioner seeks to undercut the soundness of these holdings by contending that Respondents misled the Court of Appeals in asserting there a "new theory" that the "alleged novel concept" was "adjustable back pressure" said by Petitioner to be "an afterthought" and "a fiction". If Respondents would have been in the position to show that the specification or the claims make reference to the term "adjustable back pressure", they would have rendered a service to their cause, however, since their specification and claims of the Willert patent are silent about this term and do not provide any antecedent or definition for this term what it means in connection with the Willert structure, Respondents must accept Petitioner's allegation that the alleged concept of "adjustable back pressure" amounts really to an "afterthought", a "fiction" or "gimmick", in order to create a semblance of alleged invention.

Apparently Respondents refuse to recognize a defeat when they are driven out from their last position of re-

treat with the new theory acquired in the Court of Appeals that the invention resides now in the application of adjustable back pressure known *per se* by Wiedmann in connection with the plasticizing of plastic material.

Counsel for Respondents Suffered Defeat

Another case decided very recently by the Court of Appeals in the Second Circuit in which case Counsel for Respondents herein presented likewise the Patentee and in pursuing the same tactics as applied in the present case found that in a situation where the claims define a combination of old elements a combination invention is not patentable unless the whole is more than the sum of the parts.

This case is *Continental Can Company Inc.* v. *Old Dominion Box Company et al.*, 157 U.S.P.Q. 353. Since this case has not been reported yet in the Federal Second, Petitioner submits attached herewith a photostatic copy of that case published under 157 U.S.P.Q. 353 under Appendix G. As in the present case, Counsel for Respondents herein also admitted in that case that all elements of the claims are old and known and said invention resides in the combination of said old elements. Both, the District Court and the Court of Appeals in the Second Circuit, recognized, however, that a greater demand must be made if the invention resides merely in the combination of old elements. The Court of Appeals for the Second Circuit recognized that

> "the danger of removing existant knowledge from the public domain is more acute with respect to inventions involving a combination of elements or devices common in the prior art and, therefore, 'courts should scrutinize combination patent claims with a care proportionate to the difficulty and improbability of finding invention in assembly of old elements.' Great Atlantic

and P Tea Company v. Supermarket Eq. Corp., 340 U. S. 147, 152 (1950)."

The Court of Appeals also found that commercial success and solution of a long standing need in the art are secondary considerations which cannot breathe life into a patent otherwise invalid because of obviousness.

Respondents finally allege that the judgment and the order of which review is here sought are not final. On the other hand, Respondents do not indicate at all what recourse would be available for Petitioner save the present petition for certiorari. *Hamilton-Brown Shoe Company* v. *Wolf Brothers & Company,* 240 U. S. 251, 258 (1916), does not apply to the present case because as clearly stated in this case a petition for certiorari was filed against a judgment which was not final. It is for this reason that this case would not apply to the present case.

Conclusion

It is Respondents' contention that these petitions represent nothing more than attempts by a defeated litigant to obtain further review on the methods of a judgment of patent validity. Actually these petitions represent sincere attempts to correct a great error committed by the Court of Appeals for the Third Circuit. It appears that Respondents attempt to hide behind general phrases or by not facing the issues, since Respondents failed to respond to the Kaiser *et al.* patent on its merits. The Respondents' reference to *Magnum Import Co.* v. *Coty,* 262 U. S. 159, 163 (1923), is again significant. In significant manner Respondents did choose to cite from that case out of context and the sentence preceding the sentence stated by Respondents reads as follows:

"The jurisdiction to bring up cases by certiorari from the Circuit Court of Appeals was given for two pur-

poses: first, to secure uniformity of decision between those courts in the nine circuits; and second to bring up cases involving questions of importance which is in the public interest to have decided by this court of last resort."

There cannot be any doubt that in view of the 17 licenses issued under the patent's innumerous threats to a great part of the industry in the United States and in foreign countries and last but not least the Respondents' admission that a majority of the specific industry is concerned with the Willert patent, the present case involves questions of importance which, in the public interest should be decided by this Court of last resort.

The first petition No. 1384 is warranted in order to correct a great error rendered by the Court of Appeals for the Third Circuit which is of greatest interest to the majority of the plastic industry in the United States and in foreign countries and the necessity for said petition cannot be demonstrated better than pointing to lack of convincing statements bringing out patentable distinctions between the Willert patent and the prior art patents considered by the courts below. Finally also a striking distinction of the case of *United States* v. *Adams* was clearly set forth above which indicates beyond any doubt that *United States* v. *Adams* was decided in favor of the inventor because by his teaching he brought about an unexpected result, while in the present case even Willert does not dare to mention that his invention brings about an unexpected result.

The second petition No. 1408 aiming at a reversal of the decision upon the motion to reopen the case before the District Court in view of the newly presented Kaiser *et al.* patent should be granted since Respondents' apparent refusal to deal with the merits of this patent, is tantamount to an admission of the anticipation of the alleged Willert

invention. For this reason the writ should also be granted to the second petition.

It should finally be emphasized that in case the writ for the first petition is granted and the decision of the Court of Appeals is reversed, the second petition becomes moot.

Respectfully submitted,

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Appendix G

(See opposite ☞)

Court of Appeals, Third Circuit

THE GENERAL TIRE & RUBBER COMPANY v. ISOCYANATE PRODUCTS, INC.

Nos. 16737-8 Decided Apr. 16, 1968

Appeals from District Court for District of Delaware, Wright, Ch. J.; 155 USPQ 339.

Action by The General Tire & Rubber Company against Isocyanate Products, Inc., for patent infringement.

Action by Isocyanate Products, Inc., against The General Tire & Rubber Company for declaratory judgment of patent invalidity.

From judgment denying motion by The General Tire & Rubber Company to dismiss declaratory judgment action and granting motions by Isocyanate Products, Inc., to add party and to enjoin prosecution of action in another court, both parties appeal. Affirmed.

JOHN T. KELTON and WATSON, LEAVENWORTH, KELTON & TAGGART, both of New York, N.Y., for The General Tire & Rubber Company.

C. WALTER MORTENSON and MORTENSON & WEIGEL, both of Wilmington, Del., for Isocyanate Products, Inc.

Before MCLAUGHLIN, FORMAN, and FREEDMAN, Circuit Judges.

PER CURIAM.

On a full consideration of the arguments of appellant we are satisfied that the district court acted within the allowable range of its discretion. The reasoning expressed in its opinion, reported at 270 F.Supp. 868, 155 USPQ 339 (D.Del. 1967), fully justifies the conclusion that its discretion was wisely exercised.

The judgment will be affirmed.

Court of Appeals, Second Circuit

CONTINENTAL CAN COMPANY, INC. v. OLD DOMINION BOX COMPANY, INC., et al.

No. 252 Decided Apr. 8, 1968

PATENTS

1. Courts of Appeals — Issues determined (§ 29.10)

In absence of cross appeal, court denies attorney's fees to appellee which obtained declaratory judgment that appellant's patent is invalid.—Continental Can Co., Inc. v. Old Dominion Box Co., Inc. (CA 2) 157 USPQ 353.

2. Patentability—Invention—In general (§ 51.501)

Issue as to what prior art is relevant depends upon what a skilled person in the field would be expected to know in connection with his art.—Continental Can Co., Inc. v. Old Dominion Box Co., Inc. (CA 2) 157 USPQ 353.

3. Patentability — Aggregation or combination—In general (§ 51.151)

Patentability—Invention — In general (§ 51.501)

It is not sufficient to support patentability that combination of elements be merely new or even represent a modest improvement in the art; such combination must also be nonobvious to person having ordinary skill in the art; danger of removing existent knowledge from public domain is more acute with respect to inventions involving a combination of elements common in prior art; combination invention is not patentable unless the whole is more than sum of the parts.—Continental Can Co., Inc. v. Old Dominion Box Co., Inc. (CA 2) 157 USPQ 353.

4. Patentability—Invention—In general (§ 51.501)

Failure to show that patents and prior uses anticipate patented invention under 35 U.S.C. 102 does not eliminate them from field of prior art under section 103.—Continental Can Co., Inc. v. Old Dominion Box Co., Inc. (CA 2) 157 USPQ 353.

5. Presumption from patent grant—Patent Office consideration of prior art (§ 55.5)

Presumption of patent validity is weakened by failure of Patent Office to consider important prior art.—Continental Can Co., Inc. v. Old Dominion Box Co., Inc. (CA 2) 157 USPQ 353.

6. Patentability — Evidence of—Commercial success—In general (§ 51.4551)

Patentability — Evidence of—Delay and failure of others to produce invention (§ 51.456)

Commercial success and solution of long-standing need in art are secondary considerations which cannot breathe life into patent invalid for obviousness.—Continental Can Co., Inc. v. Old Dominion Box Co., Inc. (CA 2) 157 USPQ 353.

7. Patentability — Evidence of—Solution by several parties (§ 51.465)

Simultaneous invention by third party buttresses conclusion that patented invention was obvious.—Continental Can Co., Inc. v. Old Dominion Box Co., Inc. (CA 2) 157 USPQ 353.

Particular patents—Paperboard Carrier

2,990,997, Weiss, Paperboard Carrier, invalid.—Continental Can Co., Inc. v. Old Dominion Box Co., Inc. (CA 2) 157 USPQ 353.

Appeal from District Court for Southern District of New York, Graven, J.; 155 USPQ 70.

Action by Old Dominion Box Company, Inc., and Dacam Corporation against Continental Can Company, Inc., for declaratory judgment of patent invalidity and nonfringement. From judgment for plaintiffs, defendant appeals. Affirmed.

WILLIAM K. KERR (DAVID W. PLANT of counsel) both of New York, N.Y., for appellant.

HAROLD JAMES (JAMES & FRANKLIN on the brief) both of New York, N.Y., for appellees.

Before WATERMAN and FEINBERG, Circuit Judges, and BARTELS, District Judge.*

BARTELS, District Judge.

Continental Can Company, Inc. appeals from a declaratory judgment of the District Court holding invalid for want of invention under 35 U.S.C.A. § 103, the patent known as A. J. Weiss Patent (2,990,997), relating to a rotary latching or locking action on wrap-around cartons or carriers, and also holding unenforceable under 35 U.S.C.A. § 135(c) any rights Continental might have had under the Weiss patent.

[1] Old Dominion Box Company, Inc. was engaged in the business of manufacturing and selling cartons and Dacam Corporation was engaged in the business of designing and licensing packaging machinery and equipment (both will be referred to as Old Dominion). In instituting the action Old Dominion alleged not only that the Weiss patent was invalid and unenforceable but also that the patent known as H. Ganz Patent (2,986,857), relating to a machine for wrap-around packaging including the Weiss carton, was also invalid and unenforceable. Infringement of both patents has been conceded and neither party appeals from that portion of the judgment holding the Ganz patent invalid. The trial judge did not rule upon certain claims of invalidity and unenforceability and decided others adversely to Old Dominion. Old Dominion filed no cross-appeal but asserts that all additional grounds supporting the District Court's ruling upon invalidity and unenforceability may nevertheless be considered upon this appeal, although decided adversely or not considered by the District Court. It also asserts the right to attorney's fees, which in the absence of a cross-appeal we hereby deny. Standard Acc. Ins. Co. v. Roberts, 132 F.2d 794 (8 Cir. 1942); North Texas Producers Ass'n v. Metzger Dairies, Inc., 348 F.2d 189, 197 (5 Cir. 1965), cert. denied, 382 U.S. 977 (1966).

The basic issue in this case is the validity of the Weiss patent. We affirm the District Court's finding of invalidity, rendering unnecessary the disposition of Old Dominion's additional claims and also the resolution of the issue of unenforceability.

Background

There are two general types of folding cartons, to wit: "set-up" cartons and "wrap-around" cartons. In the set-up carton the sidewalls are held in erected position by over-lapping and locking along the sides, leaving the top open in order to permit the contents to be inserted, thus requiring a two-step operation. In the wrap-around type of folding carton the contents are placed on the flat carton blank, which is thereafter erected by being wrapped around the contents and secured in place by locking together over-lapping closure panels, thereby completing the enclosure of the contents in a one-step operation.

There are also two types of "wrap-around" cartons, i.e., "open-ended" or four-sided and "closed-ended" or six-sided, the only difference being the presence or absence of the end walls. In wrap-around packaging, at least of the open-ended type, a carton design which insures a secure, tight package is vital. In such cartons the group of containers about which the carton blank is to be wrapped is positioned by the machine on top of the central panel, or that central panel may be placed on top of the containers. As the carton and the containers advance through the wrapping machine, the latter automatically folds the two side panels of the carton against the sides of the containers, and then folds the two closure panels into overlapping position. The carton is thus wrapped in open-ended, rectangular form about its contents, and finally the overlapping closure panels are fastened together by glue, staples, interlocking parts formed in the overlapping panels, or a combination of two of these alternatives. Glue closures, metal staples and punch locking systems or devices in wrap-arounds were found unsatisfactory for various reasons. There was a need for a machine and a carton which per-

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*Of the Eastern District of New York sitting by designation.

Particular patents—Paperboard Carrier

2,909,097, Weiss, Paperboard Carrier, invalid—Continental Can Co., Inc. v. Old Dominion Box Co., Inc. (CA 2) 157 USPQ 353

Appeal from District Court for Southern District of New York, Craven, J.

Action by Old Dominion Box Corporation against Continental Can Company, Inc., for declaratory judgment of patent invalidity and noninfringement. From judgment for plaintiffs, defendant appeals. Affirmed.

WILLIAM K. KERR (DAVIS, HOXIE, FAITHFULL & HAPGOOD, of counsel) both of New York, N.Y., for appellant.

HAROLD DAVIS (DAVIS & FRAZIKIAN on the brief) both of New York, N.Y., for appellees.

Before WATERMAN and FRIENDLY, Circuit Judges, and DAWKINS,* District Judge.

DAWKINS, District Judge.

Continental Can Company, Inc., appeals from a declaratory judgment of the District Court holding invalid for want of invention under 35 U.S.C.A. § 103 the patent known as A. J. Weiss Patent 2,909,097, relating to a rotary machine for locking action to wrap-around cartons or carriers, and also holding unenforceable under 35 U.S.C.A. § 154(c) any rights Continental might have had under the Weiss patent.

[1] Old Dominion Box Company, Inc., was engaged in the business of manufacturing and selling cartons and Diecraft Corporation was engaged in the business of designing and licensing packaging machinery and equipment (both will be referred to as Old Dominion). In instituting the action Old Dominion alleged, not only that the Weiss patent was invalid and unenforceable but also that the patent known as H. Glass Patent (2,960,857) relating to a machine for wrap-around packaging including the Weiss device, was also invalid and unenforceable. Infringement of both patents has been conceded and neither party appeals from that portion of the judgment holding the Glass patent invalid. The trial judge did not rule upon certain claims of invalidity and unenforceability and dismissed others adversely to Old Dominion. Old Dominion filed no cross-appeal but asserts, that all additional grounds supporting the District Court's ruling upon invalidity and unenforceability may nevertheless be considered upon this appeal, although decided adversely or not considered by the District Court. It also asserts the right to attorney's fees, which in the absence of a cross-appeal we deny by Standard Acc. Ins. Co. v. Roberts, 182 F.2d 791 (8 Cir. 1942); North Texas Producers Ass'n v. Metzger Dairies, Inc., 348 F.2d 189, 197 (5 Cir. 1965), cert. denied, 382 U.S. 977 (1966).

The basic issue in this case is the validity of the Weiss patent. We affirm the District Court's finding of invalidity, rendering unnecessary the disposition of Old Dominion's additional claims and also the resolution of the issue of unenforceability.

Background

There are two general types of folding cartons, to wit: "setup" cartons and "wrap-around" cartons. In the setup carton the sidewalls are held in erected position by over-lapping and locking along the sides, leaving the top open in order to permit the contents to be inserted, thus requiring a two-step operation. In the wrap-around type of folding carton the contents are placed on the flat carton blank, which is thereafter erected by being wrapped around the contents and secured in place by locking together over-lapping closure panels, thereby completing the enclosure of the contents in a one-step operation.

There are also two types of "wrap-around" cartons, i.e., "open-ended" or four-sided and "closed-ended" or six-sided, the only difference being the presence or absence of the end walls. In wrap-around packaging, at least of the open-ended type, a carton design which insures a secure, tight package is vital. In such cartons the group of containers about which the carton blank is to be wrapped is positioned by the machine on top of the central panel, or that central panel may be placed on top of the containers. As the carton and the containers advance through the wrapping machine, the latter automatically folds the two side panels of the carton against the sides of the containers, and then folds the two closure panels into overlapping position. The carton is thus wrapped in open-ended, rectangular form about its contents, and finally the overlapping closure panels are fastened together by glue, staples, interlocking parts formed in the overlapping panels, or a combination of two of these alternatives. Glue closures, metal staples and punch locking systems or devices in wrap-arounds were found unsatisfactory for various reasons. There was a need for a machine and a carton which per-

* Of the Eastern District of New York sitting by designation

mitted a rapid packaging operation producing a carton holding containers securely in the carton and one which could be easily opened and closed. A properly designed machine was just as essential as a properly designed carton, as evident from the use of the Ganz machine for the purpose of packaging the Weiss carton. The trial judge found that "[i]n the matter of invention claimed by the defendant, those patents are closely intertwined." Similarly, the machine which was the subject matter of Arneson Patent No. 2,931,152, cited against the Ganz machine, was designed for use in packaging a carton (asserted by Old Dominion as anticipating the Weiss carton), depicted but not patented.

Weiss Invention

This invention relates to paperboard cartons and more specifically, to those which are wrapped around a group of containers. Weiss first conceived his invention on October 8, 1957, for which he filed an application on July 15, 1958, and thereafter received a patent on July 4, 1961. The patent describes a wrap-around carrier, typical examples being the familiar "six-pack" carriers of beer or soft drink cans or bottles.

The substance of the invention appears in Claim 1, where Weiss describes the design of a wrap-around carton with two side panels to be folded against the sides of the cans, and two closure panels to be folded into an overlapping position and then fastened by a rotary action of hooking a latching flap with the catches and tongues in one overlapping closure panel into the latch openings and slots in the other overlapping closure panel, thus producing automatic tightening. In his specifications Weiss stated that it was not too difficult to obtain fastening which produced tightness, but that it was rather difficult to combine the attribute of tightness with the unique facility of easily opening the wrap-around structure.[1] In describing the action of the latch, Weiss said that "the rotary latching action can, *if desired*, produce an automatic tightening of the package as it cams or levers the closure panels into fully closed overlapping position"[2] (emphasis added). The trial judge found that beyond the normal tightness of the container due to its dimensions and extent of overlap, the rotary action produces an automatic tightening effect of about 1/32 of an inch. Accordingly, the locking structure of the Weiss patent may or may not produce automatic tightening, depending upon the spatial relationship of the overlapping closure panels at the time the carton lock structure is pivoted. Only in Claim 1 does Weiss mention that "the action of the catch will produce an automatic tightening of the side walls against the contents as it cams or levers the closure panels into the fully closed overlapping position."[3]

Prior Art

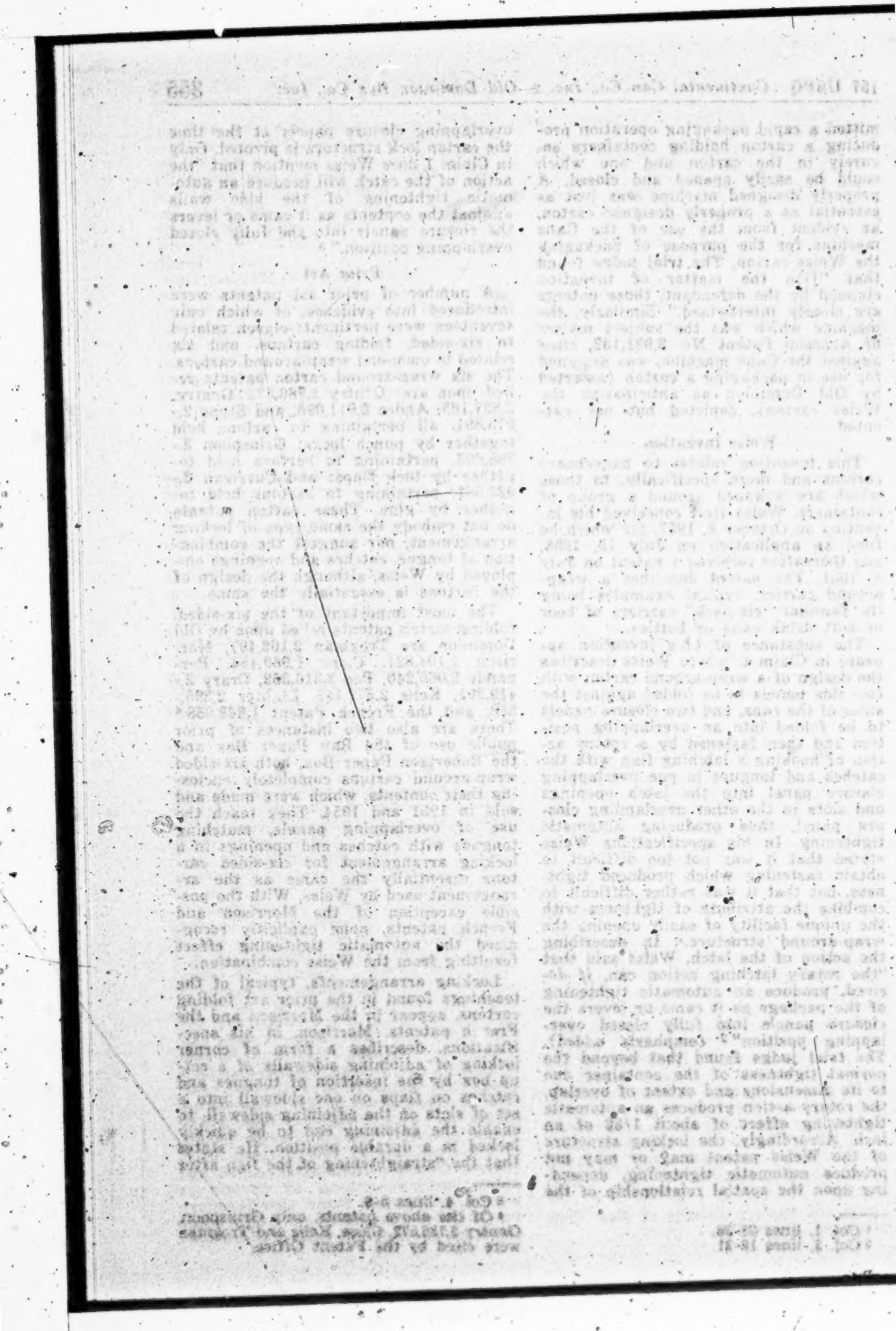
A number of prior art patents were introduced into evidence, of which only seventeen were pertinent; eleven related to six-sided, folding cartons, and six related to open-end wrap-around cartons. The six wrap-around carton patents relied upon are: Gentry 2,786,572, Gentry, 2,827,165, Andre 2,911,096, and Stone 2,975,891, all pertaining to cartons held together by punch locks; Grinspoon 2,798,603, pertaining to cartons held together by tuck flaps; and Currivan 2,922,561, pertaining to cartons held together by glue. These carton patents do not embody the same type of locking arrangement, nor suggest the combination of tongue, catches and openings employed by Weiss, although the design of the cartons is essentially the same.

The most important of the six-sided, folding carton patents relied upon by Old Dominion are Trogman 2,102,497, Morrison 1,104,821, Close 1,669,454, Pergande 2,060,240, Poe 2,316,362, Crary 2,419,391, Kells 2,572,159, Lighter 2,395,558, and the French Patent 1,063,058.[4] There are also two instances of prior public use of the Ray Paper Box and the Robertson Paper Box, both six-sided wrap-around cartons completely enclosing their contents, which were made and sold in 1951 and 1954. They teach the use of overlapping panels, matching tongues with catches and openings in a locking arrangement for six-sided cartons essentially the same as the arrangement used by Weiss. With the possible exception of the Morrison and French patents, none explicitly recognized the automatic tightening effect resulting from the Weiss combination.

Locking arrangements, typical of the teachings found in the prior art folding cartons, appear in the Morrison and the French patents. Morrison, in his specifications, describes a form of corner locking of adjoining sidewalls of a set-up box by the insertion of tongues and catches on flaps on one sidewall into a set of slots on the adjoining sidewall, to enable the adjoining end to be quickly locked in a durable position. He states that the "straightening of the flap after

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[1] Col. 1, lines 28-38.
[2] Col. 3, lines 18-21.
[3] Col. 4, lines 5-8.
[4] Of the above patents, only Grinspoon, Gentry 2,786,572, Close, Kells and Trogman were cited by the Patent Office.



insertion of the inner tongue 18 into the registering slot causes such tongue and the outer end portion of the flap to exert a leverage action between the inner end portion of the flap and the wall or side portion in which the slot is provided, whereby to draw the flap and wall closely together, and also to draw the end portion of the wall to which the flap is attached firmly against the end of the adjoining wall, as indicated at 19 in Fig. 3." [5] The French Patent also refers to the closing of a box by the use of a tongue integral with the flap to be inserted into a slot in the fixed portion of the box so that the "tongue extends, in the opposite direction from that of its free end, a miter integral with the flap by a folding line forming a hinge, marked out in advance." [6] It further provides that "in particular the closing device can be modified so as to increase the effect of the elastic force which holds the miter in its plane after closing." [7] Continental admits that the locking structure in folding cartons, other than four-sided wrap-arounds, was old in the art. In fact, Weiss testified that in a general sense, he took his lock from another type of folding carton and incorporated it into a wrap-around carton.

Invalidity

Essentially, Continental's appeal is based upon two claims: one, that the patents involving the six-sided or folding cartons and the Ray Paper Box and Robertson Paper Box cartons are not relevant prior art and two, that the function of the locking elements in the six-sided cartons is entirely different from the function provided in the combination invented by Weiss relating only to open-ended wrap-around cartons. It argues that the prior art six-sided cartons patents and the Ray and Robertson carton present no problem of losing their contents because they are closed on all sides, whereas the function of the Weiss lock in an open-ended wrap-around carton is to provide a tight package by drawing the sidewalls of the carton against the containers inside the package and then locking the closure panels by a rotary action. Continental emphasizes the fact that automatic tightening as provided by the Weiss invention, was neither intended nor accomplished by the prior art cartons.

Old Dominion contends that the Weiss locking device was amply demonstrated in the prior art patents covering six-sided cartons and also in the Ray and Robertson cartons (which were wrap-arounds), which cartons could be secured in an erected position after the overlapping closure panels had been folded over the contents and locked with tongues with catches inserted in openings, and that the locking structure could be manipulated to produce tightening.

[2] We cannot agree that the prior art patents and cartons relating to conventional six-sided, folding cartons, are not relevant art pertaining to open-ended wrap-around cartons. Nor can we agree that the fact that tightening was not the purpose or function of such locking arrangement, whether disclosed by patent or cartons in prior public use, renders such cartons irrelevant. The issue as to what prior art is relevant depends upon what a skilled person in the field would be expected to know in connection with his art (Graham v. John Deere Company of Kansas City, 383 U.S. 1, 35, 148 USPQ 459, 473-474 (1966); Mott Corporation v. Sunflower Industries, Inc., 314 F.2d 872, 878, 137 USPQ 288, 292-293 (10 Cir. 1963); Application of Shapleigh, 248 F.2d 96, 101-102, 115 USPQ 129, 132-133 (CCPA 1957)) and we believe that a person skilled in the art of designing packaging machines and wrap-around cartons would consult the disclosures in the prior art relating to conventional six-sided, folding cartons. In fact, Weiss did exactly that. While the trial judge did not make any specific finding as to what the level of skill in the pertinent art was, we believe that reference to a person who specialized in the art of designing or constructing packaging machines and folding cartons of all types was implicit in his findings.

Admittedly, the Weiss patent is a combination of old elements taken from folding cartons and applied to open-end wrap-arounds. Undoubtedly, there was a need in the industry for a new locking arrangement in wrap-arounds and, judging from its commercial success, the Weiss invention seems to have met that need. Weiss did achieve an advancement in the art of tight wrap-around packaging at high speeds by combining or arranging certain well-known carton locking structures with a rotary latching action to produce automatic tightening.

[3] Under our patent laws it is not sufficient to support patentability that a combination of elements be merely new or even represent a modest improvement in the art. Such combination must also be "nonobvious" to a person having ordinary skill in the art. 35 U.S.C.A. § 103. To uphold patentability where an invention is obvious would be "* * * to remove existent knowledge from the public domain, or to restrict free access to materials already avail-

[5] Col. 2, lines 24-35.
[6] P. 1.
[7] P. 7.

interior of the inner turning of the
the projecting slot opening
and the outer wall portion of the flap in
cave a leverage action between the
inner end portion of the flap and the
wall or side portion in which the slot is
provided, whereby to draw the flap
wall firmly together into the slot and
the end portion of the web to which the
flap is attached firmly into the slot
of the adjoining wall, as shown
in the drawing. The
relative to the closing of a box by
of a tongue into a slot on the
opposite side wall of the box so that
in the opposite direction
the one wall, a similar
flap by a folding line forming a
with the end portion of the
that in particular this closing
vide an improved
effect of the flaps
the outer
flaps and the
wherein the
wherein the
wherein

able," which violates not only Section 103 but also the Constitutional criterion. Graham v. John Deere Company of Kansas City, supra, at p. 6, 148 USPQ 462-463. The danger of removing existent knowledge from the public domain is more acute with respect to inventions involving a combination of elements or devices common in the prior art and therefore, "Courts should scrutinize combination patent claims with a care proportionate to the difficulty and improbability of finding invention in an assembly of old elements." Great Atlantic & P. Tea Co. v. Supermarket Eq. Corp., 340 U.S. 147, 152, 87 USPQ 303, 305-306 (1950). A combination invention is not patentable unless the whole is more than the sum of the parts. Ling-Temco-Vought, Inc. v. Kollsman Instrument Corp., 372 F.2d 263, 152 USPQ 446 (2 Cir. 1967).

[4] No showing has been made that any of the patents or prior use cartons cited anticipated the Weiss invention under Section 102, 35 U.S.C.A., but this failure does not eliminate such patents and cartons from the field of prior art. Depending upon how it is designed and manipulated, the locking structure of a carton, as we have seen, may or may not produce tightening. The prior art patents and cartons disclose locking structures and devices in six-sided cartons, both set-up and wrap-around, which, as demonstrated in the Morrison and French patents, can produce tightening by means of an increased overlap between the panels produced by a manipulation of the locking arrangement. The combination of the Morrison teachings with the wrap-around art makes the Weiss invention obvious. The differences between the two types of cartons were not sufficient to render nonobvious the application and adaptation of the locking arrangement disclosed in one to the purpose and function of the other.[8]

[5] Commercial success and solution of a long-standing need in the art are secondary considerations which cannot breathe life into a patent otherwise invalid because of obviousness. Calmar, Inc. v. Cook Chemical Co., sub nom. Graham v. John Deere Company of Kansas City, supra, at pp. 35-36, 148 USPQ 473-474; Preuss v. General Electric Co., Inc., 2 Cir. 157 USPQ 177. Upon this subject there is some ambiguity as to whether the difficulty in solving the packaging problem and Continental's subsequent commercial success were due to the development of the corresponding packaging machine (i.e., the Ganz machine), the patent for which was declared invalid, as well as to the development of the cartons, especially since the speed of operation was a key feature of the combined carton-machine invention. See, Welsh Manufacturing Co. v. Sunware Products Co., 236 F.2d 225, 227, 110 USPQ 161, 163 (2 Cir. 1956); Wilson Athletic G. Mfg. Co. v. Kennedy Sport. G. Mfg. Co., 233 F.2d 280, 109 USPQ 303 (2 Cir. 1956).

[7] Finally, mention should be made of the Arneson invention, which the District Court found was conceived between May 7, 1957 and June 6, 1957, earlier than the Weiss invention, but made no ruling with respect to reduction of the invention to practice. We are not here concerned with Arneson's anticipation under Section 102, an issue upon which we do not pass, but rather in the disclosures of Arneson's applications as evidence of simultaneous invention. On June 30, 1958 Arneson filed an application for a patent for a single row packaging machine, in which he included a sketch of a wrap-around carton to be used therewith, which was practically identical with the Weiss carton. It is true that in his application he did not claim the carton as part of the invention, but he did refer to folding the wrapper tightly around the cans "so that * * * the cans 10 are securely held in the wrapper."[9] On December 24, 1959, over two years after the Weiss invention (October, 1957) and a year and a half after Weiss filed his application (July, 1958), Arneson filed an application for a patent for a wrap-around carton in which the locking elements had the "inherent tendency * * * to draw the blank tight about the articles as the interlocking engagement thereof is accomplished,"[10] depicting in his sketches the Weiss locking arrangement. By an amendment dated October 23, 1961, to his 1959 application, Arneson specifically described the "automatic tightening" effect of his device. Thus the sketches of Arneson and his patent applications are evidence of a simultaneous invention and while not in the realm of anticipation or of prior art, nevertheless buttress the conclusion negating nonobviousness of the Weiss invention. Wilson Athletic G. Mfg. Co. v. Kennedy Sport G. Mfg. Co., supra; Felburn v. New

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[8] The presumption of validity attaching to issued patents is substantially weakened by the failure of the Patent Office to consider important prior art, such as the Morrison and French patents and the Ray and Robertson boxes. Formal Fashions, Inc. v. Braiman Bows, Inc., 369 F.2d 536, 152 USPQ 78 (2 Cir. 1966); Zoomar, Inc. v. Paillard Products, Inc., 258 F.2d 337, 118 USPQ 302 (2 Cir. 1958), cert. denied, 358 U.S. 908, 119 USPQ 502.

[9] Col. 2, lines 56-58.

[10] Plaintiffs' Exhibit EV-1, pp. 8-9.

able" which violates not only Section 107 but also the Constitutional provision.

Graham v. John Deere Company of Kansas City, supra, at p. 6, 148 USPQ 462. The decision of Judge Learned Hand in the patent claims in question is not entitled to any presumption of validity as to the presumption of validity as presumed by the Patent Office to consider him [illegible] at all, such as the Morrison and French patents and the Ray and Robertson, Boyer, Portnoy Patents, Inc. v. Bruning Sons, Inc. 389 F.2d 534, 152 USPQ 19 (1 Cir. 1966); Zoomar, Inc. v. Paillard Products, Inc., 389 F.2d 321, 151 USPQ 252 (2 Cir. 1967), cert. denied 388 U.S. 908, 156 USPQ 592.

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[6] "The presumption of validity attaching to issued patents is substantially weakened by the failure of the Patent Office to consider [illegible] at all, such as the Morrison and French patents and the Ray and Robertson, Boyer, Portnoy Patents, Inc. v. Bruning Sons, Inc. 389 F.2d 534, 152 USPQ 19 (1 Cir. 1966); Zoomar, Inc. v. Paillard Products, Inc., 389 F.2d 321, 151 USPQ 252 (2 Cir. 1967), cert. denied 388 U.S. 908, 156 USPQ 592.

[7] See 35 USC 103; Graham v. John Deere Company of Kansas City, supra, at p. 6, 148 USPQ 462.

[8] The decision of Judge Learned Hand in the Morrison and French patents and the Ray and Robertson, Boyer, Portnoy Patents, Inc. v. Bruning Sons, Inc. 389 F.2d 534, 152 USPQ 19 (1 Cir. 1966); Zoomar, Inc. v. Paillard Products, Inc., 389 F.2d 321, 151 USPQ 252 (2 Cir. 1967), cert. denied 388 U.S. 908, 156 USPQ 592.

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[9] Cox, 3, lines 64-68.

[10] Plaintiff's Exhibit EX-1, pp 8-9

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[11] USPQ Continental Can Co., Inc. v. Old Dominion Box Co., Inc. 357

York Central Railroad Company, 350 F.2d 416, 146 USPQ 622 (6 Cir. 1965), cert. denied, 383 U.S. 935, 148 USPQ 771 (1966); "Subtests of 'Nonobviousness': A Nontechnical Approach to Patent Validity," 112 U. Pa.L.Rev. 1169, 1181 (1964).

Affirmed.

Court of Appeals, Fifth Circuit

BINKS MANUFACTURING COMPANY v. THE SPEE-FLO MANUFACTURING CORPORATION

No. 24851 Decided Apr. 18, 1968

PATENTS

Particular patents—Spray Gun

3,000,576, Levey and Harvey, Spray Gun, valid and infringed.—Binks Mfg. Co. v. Spee-Flo Mfg. Corp. (CA 5) 157 USPQ 358.

Appeal from District Court for Southern District of Texas, Singleton, J.; 153 USPQ 120.

Action by The Spee-Flo Manufacturing Corporation against Binks Manufacturing Company for patent infringement. From judgment for plaintiff, defendant appeals. Affirmed.

TOM ARNOLD and ARNOLD, ROYLANCE, KRUGER & DURKEE, both of Houston, Tex., for appellant.

HAROLD F. MCNENNY and MCNENNY, FARRINGTON, PEARNE & GORDON, both of Cleveland, Ohio, and EDWARD HUTCHESON and HUTCHESON, TALIAFERRO & GRUNDY, both of Houston, Tex., for appellee.

Before COLEMAN and CLAYTON, Circuit Judges, and JOHNSON, District Judge.

PER CURIAM.

The Spee-Flo Manufacturing Company, appellee, charged Binks Manufacturing Company, appellant, with infringement of Spee-Flo patent number 3,000,576. The District Court found the patent valid and infringed. The opinion of the District Court is published at 264 F.Supp. 542, 153 USPQ 120 (1967).

Although most favorably impressed by the brilliant argument of counsel for appellant, presented both orally and in briefs, we are nevertheless convinced that the District Judge was right. We see no necessity for duplication of or further comment on the opinion below.

The judgment, therefore, will be affirmed and the case remanded to the District Court for further proceedings.

Court of Appeals, District of Columbia

HOFFENBERG v. KAMINSTEIN

No. 21152 Decided Apr. 23, 1968

COPYRIGHTS

1. In general (§ 24.01)

Except when ad interim provisions of sections 22 and 23 are met, section 16 of Copyright Code allows copyright registration of English-language books by United States citizens only where first publication is printed in United States; intention of Congress is accurately reflected in 37 C.F.R. § 202.4(b) which provides that American edition of English-language book identical in substance to that first published abroad will not be registered unless ad interim registration is first made.—Hoffenberg v. Kaminstein (CA DC) 157 USPQ 358.

Appeal from District Court for District of Columbia.

Action by Mason Hoffenberg against Abraham L. Kaminstein, Register of Copyrights, to compel issuance of certificate of copyright registration. From summary judgment for defendant, plaintiff appeals. Affirmed.

CHARLES REMBAR, New York, N.Y. (MORTON E. YOHALEM, Washington, D.C., on the brief) for appellant.

MICHAEL W. WERTH and JOHN C. ELDRIDGE (EDWIN L. WEISL, JR., MORTON HOLLANDER, T. HAYWARD BROWN, BARBARA A. RINGER, and DOROTHY SCHRADER on the brief) for appellee.

STANLEY L. TEMKO, Washington, D.C., for Authors League of America, amicus curiae.

BEN COHEN, Washington, D.C., and AMSTER & ROTHSTEIN, JESSE ROTHSTEIN, and BERNARD L. GOLDSTEIN, all of New York, N.Y., for Lancer Books, Inc., amicus curiae.

Before MILLER, Senior Circuit Judge, and BURGER and WRIGHT, Circuit Judges.

PER CURIAM.

Appellant and Terry Southern, both American citizens, are co-authors of the novel "Candy" which was first printed and published in the English language in France in 1958 with the appropriate